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Dismantling the Five Factor Form

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DISMANTLING THE FIVE FACTOR FORM

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Arts & Sciences at the University of Kentucky

By

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ABSTRACT OF DISSERTATION

DISMANTLING THE FIVE FACTOR FORM

The purpose of this dissertation was to provide a further validation of the Five Factor Form (FFF; Rojas & Widiger, 2014). The FFF is a brief (one page) rating form that assesses for adaptive and maladaptive variants of both poles for each of six facets for the five domains of the five-factor model. Two prior validation studies of the FFF have been completed using the items as they are scored within the FFF (Rojas & Widiger, 2014, in press). However, the FFF has a unique scoring system in which each item has normal and abnormal variants at both poles (e.g., abnormal high and abnormal low trust). This dissertation focused on a dismantling of each of the 30 FFF items in order to explore whether the four components of each item related to one another in a manner consistent with the scoring of the FFF. Two separate studies were conducted using participants from MTurk to examine this relationship. In Study One, 540 persons who were currently in or had previously received mental health treatment were sampled. Study One examined the correlations among the four components of each FFF item, including the two components on the same side as well as with the two components on the opposite side. It would be consistent with the FFF scoring to have the two FFF components occupying the same side of the item (i.e., assessing the same or similar trait but differing in adaptivity) correlate positively with one another and components occupying opposite sides of a respective item correlate negatively. However, this was not expected to occur due perhaps to the impact of the maladaptivity and adaptivity of the items on the correlations, which worked in a direction opposite to the conceptual meaning of the respective components. The results of Study One were consistent with expectations, producing mixed results for the FFF scoring. Study Two examined the perceived similarities and differences in the conceptual meaning for the same component comparisons. The sample sizes ranged from 89 to 101 persons. It was hypothesized in this case that for each FFF item, the two FFF components occupying the same side of the item would be rated as being similar in meaning to one another, whereas components occupying opposite sides of the respective item would be considered to be opposite in meaning. The results from Study Two provided consistent and strong support for the FFF scoring. The implications of the results from Studies One and Two for the assessment of adaptive and maladaptive personality functioning are discussed.

KEYWORDS: Five Factor Form, Five Factor Model, Self-Report, Bipolarity, Personality Structure

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Chapter One: Introduction

A commonly used model of general personality structure is the Five Factor Model (FFM). As assessed by the NEO Personality Inventory-Revised (NEO PI-R; Costa & McCrae, 1992), the FFM consists of the five domains of neuroticism, extraversion (versus introversion), openness (versus closedness), agreeableness (versus antagonism), and conscientiousness. The NEO PI-R (as well as many other measures of the FFM) are confined largely to the assessment of adaptive variants of extraversion, openness, agreeableness, conscientiousness, and low neuroticism and, in a complementary fashion, to maladaptive variants of introversion, closedness, antagonism, low conscientiousness, and high neuroticism. However, there is a body of theory and research to support the view that there are social and clinically meaningful maladaptive variants of both poles of the FFM.

Bipolarity of Maladaptive Personality Structure

Nettle (2006) provided an evolutionary model for the emergence of the FFM domains. From this evolutionary perspective, there are both costs and benefits for any particular personality trait. Low levels of neuroticism are often perceived as beneficial (e.g., emotional stability), with high levels perceived as a disadvantage (i.e., emotional instability). However, Nettle suggested costs and benefits at both poles of neuroticism. Nettle argued that very low neuroticism may contain costs such as difficulties with hazard avoidance. Although very high neuroticism has evident drawbacks, the inability to experience any meaningful level of anxiousness (a facet of neuroticism) would likely make it difficult for a person to anticipate and avoid risks and dangers. Extraversion includes being assertive, excitement-seeking, active, and gregarious. Benefits of high

levels of extraversion include increased mating opportunities and increased social engagement, but may also include costs regarding personal safety. Extreme assertiveness can become domineering or pushy, and excitement-seeking can become reckless, risky, and foolhardy. Similarly, the benefits of agreeableness traits such as generous, trusting, and humble may be offset by costs such as an excessively self-sacrificing responsiveness to the needs and wellbeing of others as well as gullibility. The benefits of conscientious self-control, orderliness, and achievement-striving are self-evident, but Nettle suggested that this domain of personality can also have significant costs, such as perfectionism and missed opportunities (due to excessive constraint). Potential costs of very high levels of openness are the acceptance and delving into irrational belief systems, such as supernatural or paranormal beliefs.

There is also a body of research in support of maladaptive variants of both poles of the FFM. For example, Coker, Samuel, and Widiger (2002) conducted a lexical study for the presence and extent of socially undesirable, maladaptive traits within the Big Five domains. Coker et al. had participants code each of the 1,710 trait terms within the English language compiled by Goldberg (1993) with respect to their undesirability, and then considered their location within the Big Five. It was apparent that there are considerably more terms rated as socially desirable for low neuroticism than for high neuroticism, for high rather than low openness, for agreeableness than for antagonism, and for high conscientiousness than for low conscientiousness. Nevertheless, there were still many maladaptive trait terms rated as undesirable for agreeableness (e.g., "ingratiating" and "dependent"), extraversion (e.g., "blustery" and "flaunty"), openness (e.g., "unconventional"), conscientiousness (e.g., "leisureless" and "tight"), and even for

low neuroticism (e.g., "unemotional"). In fact, 45% of the high extraversion traits terms were rated as undesirable.

Additional research also supports the hypothesis that there are maladaptive variants of all five of the traditionally adaptive poles of the FFM. For example, FFM agreeableness and extraversion are essentially 45 degree rotations of the interpersonal circumplex (IPC) domains of agency and communion (McCrae & Costa, 1989; Wiggins & Pincus, 2002) and it is well established that there are maladaptive variants of all eight octants of the IPC (Pincus & Hopwood, 2012), including the locations occupied by high agreeableness and high extraversion. Leary (1957) referred to the lower-right section of the IPC, the precise location of FFM agreeableness, as the "docile-dependent" octant and studies have indeed confirmed a close relationship of dependency with the agreeableness octant of the IPC (e.g., Morey, 1985; Sim & Romney, 1990; Smith, Hilsenroth, & Bornstein, 2009; Soldz, Budman, Demby, & Merry, 1993; Trobst, Ayearst, & Salekin, 2004). The Inventory of Interpersonal Problems (IIP; Horowitz, Alden, Wiggins, & Pincus, 2000) includes scales for all eight octants, and their structural relationships are consistent with the presence of maladaptivity at every octant, such as an Overly Accommodating scale as a measure of maladaptive agreeableness (which correlates negatively with the antagonistic Vindictive Self-Centered scale; Horowitz et al., 2000).

Multiscale measures of maladaptive personality functioning will typically demonstrate a bipolarity in maladaptive personality structure, such as the Schedule for Nonadaptive and Adaptive Personality-2 (SNAP-2; Clark, Simms, Wu, & Casillas, 2014), the Five Factor Model Personality Disorder (FFMPD) scales (Widiger, Lynam, Miller, & Oltmanns, 2012), the Computerized Adaptive Test-Personality Disorder (CAT-

PD; Simms et al., 2011), and the Personality Inventory for DSM-5 (PID-5; Krueger, Derringer, Markon, Watson, & Skodol, 2012). The SNAP-2 includes 12 trait scales (e.g., Self-Harm, Entitlement, Eccentric Perceptions, Workaholism, Detachment, and Manipulation) that are grouped into the three higher-order domains of negative affectivity, positive affectivity, and constraint that align well with the neuroticism, extraversion, and conscientiousness domains of the FFM (Watson, Clark, & Harkness, 1994). The Exhibitionism and Entitlement scales load positively on the positive affectivity domain (which aligns with FFM extraversion), whereas the Detachment scale loads negatively. Similarly, Propriety and Workaholism load positively on the constraint factor (which aligns with FFM conscientiousness), whereas the Impulsivity scale loads negatively. This SNAP-2 bipolarity has been replicated in many factor analytic studies (e.g., Markon, Krueger, & Watson 2005; Simms & Clark, 2005, 2006; Watson, Clark, & Chmielewski, 2008).

The CAT-PD contains 33 trait scales organized within five domains of negative emotionality, detachment, antagonism, disconstraint, and psychoticism that were aligned with the five domains proposed for DSM-5 by Widiger and Simonsen (2005) and, as indicated by Wright and Simms (2014), with the FFM. The CAT-PD has three scales that load negatively on disconstraint (i.e., Perfectionism, Rigidity, and Workaholism), which aligns with FFM conscientiousness, whereas Irresponsibility, Nonplanfulness, and Non-perseverance load positively (Wright & Simms, 2014). The CAT-PD also has a scale for maladaptive extraversion, Exhibitionism, which loads negatively on the detachment factor (which aligns with FFM introversion), whereas other CAT-PD scales load positively (e.g., Anhedonia and Social Withdrawal).

The PID-5 (Krueger et al., 2012) provides the official assessment of the dimensional trait model included within Section III of DSM-5 (APA, 2013). This dimensional trait model was first developed through nominations of maladaptive traits from DSM-5 work group members regarding respective personality disorders included within DSM-IV-TR (APA, 2000; Krueger et al., 2012). The 25 PID-5 scales are organized into five domains of negative affectivity, detachment, antagonism, disinhibition, and psychoticism that are explicitly aligned with the FFM (APA, 2013, p. 773). The DSM-5 trait model does not include exhibitionism (included within the CAT-PD) or Propriety or Workholism (included within the SNAP-2). However, the DSM-5 trait model does include rigid perfectionism, as a trait opposite to disinhibition (i.e., a maladaptive variant of conscientiousness).

The FFMPD is a set of 99 scales from eight inventories, including the Elemental Psychopathy Assessment (EPA; Lynam et al., 2011), the Five Factor Schizotypal Inventory (FFSI; Edmundson, Lynam, Miller, Gore, & Widiger, 2011), the Five Factor Borderline Inventory (FFBI; Mullins-Sweatt et al., 2012), and the Five Factor Avoidant Assessment (FFAvA; Lynam, Loehr, Miller, & Widiger, 2012). Quite a bit of research has documented that the alignment of these scales with the FFM. Most importantly for the current dissertation, is that the FFMPD measures include scales at both poles of all five domains of the FFM. For example, there are numerous scales involving maladaptive variants of high neuroticism, but also for low neuroticism, such as Invincibility from the EPA (Lynam et al., 2011). There are also scales for high extraversion, such as Attention-Seeking from the Five Factor Histrionic Inventory (FFHI; Tomiatti, Gore, Lynam, Miller, & Widiger, 2012), Exhibitionism from the Five Factor Narcissism Inventory (FFNI;

Glover, Miller, Lynam, Crego, & Widiger, 2012), and Thrill-Seeking from the EPA (Lynam et al., 2011). There are also scales for high openness, such as Aberrant Ideas and Odd & Eccentric from the FFSI (Edmundson et al., 2011) and Dogmatism from the Five Factor Obsessive-Compulsive Inventory (FFOCI; Samuel, Riddell, Lynam, Miller, & Widiger, 2012). There are scales for high agreeableness, such as Gullibility, Subservience, and Self-Effacing from the Five Factor Dependency Inventory (FFDI; Gore, Presnall, Miller, Lynam, & Widiger, 2012). And, finally, there are scales for high conscientiousness, such as Workaholism, Perfectionism, and Ruminative Deliberation from the FFOCI (Samuel et al., 2012). Crego and Widiger (2016) considered 36 of the FFMPD scales and demonstrated their convergent and discriminant validity with respective scales from the PID-5 and CAT-PD but, more importantly, the presence of bipolarity in their structure (e.g., Invulnerability loading negatively on a neuroticism factor; Exhibitionism, Attention-Seeking, and Flirtatiousness loading negatively on an introversion factor; Timorousness loading negatively on an agreeableness factor; and Workaholism and Perfectionism loading negatively on a disinhibition factor).

Measures of the Five Factor Model

However, many existing measures of the FFM are sorely lacking in their assessment of maladaptive high extraversion, openness, agreeableness, and conscientiousness, as well as low neuroticism. It is noteworthy that there are some NEO PI-R items concerning socially undesirable behavior for these poles of the FFM (e.g., "I'm something of a workaholic" for high conscientiousness). It is not the case that maladaptive high extraversion, openness, agreeableness, conscientiousness, and low neuroticism within the NEO PI-R are devoid of any representation of maladaptive

personality (Haigler & Widiger, 2001). On the other hand, other FFM instruments, such as the Big Five Inventory (BFI; John & Srivastava, 1999), are entirely unipolar in their representation of maladaptivity in which items describing high levels of extraversion, openness, agreeableness, and conscientiousness as well as low levels of neuroticism describe a socially desirable behavior, and all of the items keyed in the direction of low extraversion, openness, agreeableness, and conscientiousness describe a socially undesirable behavior. For example, all of the BFI items keyed in the direction of high agreeableness (e.g., "Is helpful and unselfish with others" and "Has a forgiving nature") and high conscientiousness (e.g., "Does a thorough job" and "Is a reliable worker") describe a socially desirable behavior, and all of the items keyed in the direction of low agreeableness (e.g., "Starts quarrels with others" and "Can be cold and aloof") and low conscientiousness (e.g., "Can be somewhat careless" and "Tends to be lazy") describe a socially undesirable behavior.

The Five Factor Form

Two recently developed instruments include items that incorporate a bipolarity in maladaptive personality assessment, the Five Factor Form (FFF; Rojas & Widiger, 2014) and the Sliderbar Inventory (SI; Pettersson et al., 2014). The structure of the FFF and SI items is unique in their inclusion of maladaptive variants at both poles of each item in relation to predominant measures of the FFM and personality disorders, respectively. For example, the FFF includes 30 items, each of which aligns with a respective facet of the FFM, as assessed by the NEO PI-R (Costa & McCrae, 1992). The FFF trust item includes "cynical, suspicious" and "cautious, skeptical" at one pole; at the opposite pole is "trusting" and "gullible." "Cynical, suspicious" is considered to be a maladaptive variant

of low trust, whereas "cautious, skeptical" is considered to be an adaptive variant. Similarly, at the opposite pole, "gullible" is considered to be a maladaptive variant of high trust, whereas "trusting" is considered to be an adaptive variant. Similarly, for the FFM facet achievement-striving, the respective FFF item contrasts being "workaholic, acclaim-seeking" (i.e., maladaptive) and "purposeful, diligent, ambitious" (adaptive) with being either "carefree, content" (adaptive) or "aimless, shiftless, desultory" (maladaptive). The respondent would receive a score of 5 if s/he endorsed being workaholic, acclaim-seeking; a score of 4 if s/he endorsed being purposeful, diligent, ambitious; a score of 2 if s/he endorsed being carefree, content, and a score of 1 if s/he endorsed being aimless, shiftless, desultory (or a score of 3 if s/he indicated that she was neither high nor low on the trait of achievement-striving). Appendix A provides the entire FFF measure.

Rojas and Widiger (2014) demonstrated that the FFF provides a valid assessment of the FFM by demonstrating its convergent and discriminant validity with other measures of the FFM. The FFF was compared with (1) three abbreviated and/or brief measures of the FFM (i.e., the Five Factor Model Rating Form (FFMRF; Mullins-Sweatt, Jamerson, Samuel, Olson, & Widiger, 2006), the Ten Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swann, 2003), and the BFI (John & Srivastava, 1999), (2) a more extended measure of the FFM (i.e., International Personality Item Pool-NEO; IPIP-NEO; Goldberg et al., 2006), (3) an alternative measure of general personality (i.e., the HEXACO-Personality Inventory-Revised; HEXACO-PI-R; Lee & Ashton, 2004) and (4) a measure of maladaptive personality functioning (PID-5; Krueger et al., 2012). The results demonstrated good convergent and discriminant validity. For example, the

correlation of the FFF domain scales with the BFI domain scales ranged from .57 for Agreeableness to .79 for Neuroticism.

The Sliderbar Inventory (SI) of Pettersson et al. (2014) includes items with precisely the same bipolar structure as the FFF. For example, an aggressive/submissive SI item contrasts "I get mad easily and often get into fights" at one pole with "I am a meek person" at the opposite pole of the same item. In between these two poles are considered to be adaptive variants of the same trait (i.e., "I stand up for myself if someone has done me wrong" at one pole and "I rarely lose my temper" at the other pole). Pettersson et al. (2014) suggest that having maladaptive traits at both poles of each item is an effective means of controlling for a problematic disposition (e.g., social desirability) to endorse, or not to endorse, maladaptive functioning irrespective of the content. "When items are balanced in terms of social desirability (e.g., 'I am apathetic' vs. 'I am anxious') responses are less likely to be influenced by evaluation" (Pettersson et al., 2014, p. 435).

Rojas and Widiger (in press) assessed the convergent (and discriminant) validity of the FFF with the SI. The SI scales, however, do not concern the FFM domains or facets, assessing instead the personality disorder syndromes of DSM-IV. Therefore, the SI items were organized (on a rational basis) with respect to the FFM domains (i.e., SI-FFM). This reorganization of the SI items in fact resulted in the inclusion of more items than Pettersson et al. were able to include in their original set of 14 scales. Rojas and Widiger reported good convergent (and discriminant) validity for four of the five respective SI-FFM domain scales, ranging from .45 for Conscientiousness to .63 for Neuroticism (the exception occurred for SI-FFM Openness, which had only four items). Rojas and Widiger also reported the convergence of the FFF and SI-FFM domain scales

with the FFM domain scales of the BFI. Consistent with Rojas and Widiger (2014), they reported good convergent (and discriminant) of the FFF domain scales with the BFI domain scales, ranging from .55 for Openness to .65 for Extraversion.

Current Study

However, no study to date has tested empirically whether the four components of each respective FFF items relate to one another in the manner presumed by the scoring of the respective FFF item. Consider, for example, the FFF trust item. No study to date has tested empirically whether the component "cynical, suspicious" correlates positively with "cautious, skeptical;" or whether "trusting" correlates positively with "gullible." Nor has any FFF study tested empirically whether "cynical, suspicious" and "cautious, skeptical" correlate negatively with "trusting" or "gullible." One purpose of the current dissertation was to determine whether the four components of each of the 30 FFF items correlated with one another in the expected direction.

There is empirical support for the expected relationships. For example, as noted earlier, research with the FFMPD (Widiger et al. 2012), IIP (Horowitz et al., 2000), CAT-PD (Wright & Simms, 2014), SNAP-2 (Clark et al., 2014), and PID-5 (Krueger et al., 2012) have supported the existence of the bipolar structure, at times involving essentially the same constructs as assessed by the FFF. However, these findings obtained with multiple item scales might not be replicated at the level of single items. For example, working against a negative correlation of "cynical, suspicious" with "gullible;" and a positive correlation of "trusting" with "gullible," is the common findings that measures of maladaptivity will routinely correlate positively with one another and negatively with measures of adaptivity, no matter the content (Pettersson et al., 2014). A well replicated

finding in psychopathology research is a general factor of maladaptivity, contributing to a positive correlation across most to all personality disorders, even though some would appear to represent opposing forms of behavior (e.g., histrionic versus schizoid, and dependent versus antisocial; Wright et al., 2012). The strength of this general factor may override the semantic content of individual items, compelling perhaps even a positive correlation between, for instance, suspiciousness and gullibility. This was indeed the primary, central point of Pettersson et al., who suggested that the bipolarity of maladaptive personality functioning (e.g., aggressive vs. submissive, irresponsible vs. perfectionistic, suspicious vs. gullible, and arrogant vs. inferior) can be hidden due to the tendency of dysfunction and maladjustment to correlate positively with one another, no matter the source or content.

Therefore, this dissertation obtained not only the correlations among the four components of each of the 30 FFF items. This dissertation also examined empirically whether each of the four components of each of the 30 FFF items are indeed similar and/or opposite in meaning to one another. For example, whether being "cynical, suspicious" is considered to be opposite in meaning to being "gullible;" and whether being "gullible" is similar in meaning to being "trusting."

This dissertation involved two independent studies. In the data collection for Study One, participants described themselves with respect to each of the four components of the 30 FFF items (i.e., 120 items). It was hypothesized that for each FFF item, the two FFF components occupying the same side of the item would correlate positively with one another (e.g., *cynical, suspicious* will correlate positively with *cautious, skeptical*; and *trusting* will correlate positively with *gullible*). In addition, FFF components occupying

opposite sides of a respective item would correlate negatively with one another (e.g., *cynical, suspicious* will correlate negatively with *trusting* and with *gullible*, and *trusting* will correlate negatively with *cautious, skeptical*).

In the data collections of Study Two, participants indicated whether each of the four components within each FFF item were similar and/or different in meaning to one another. It was hypothesized that for each FFF item, the two FFF components occupying the same side of the item would be rated as being similar in meaning to one another (e.g., *cynical, suspicious* would be considered to be similar in meaning with *cautious, skeptical*; and *trusting* would be considered to be similar in meaning with *gullible*). In addition, FFF components occupying opposite sides of the respective item would be considered to be opposite in meaning (e.g., *cynical, suspicious* would be considered to be opposite in meaning to *trusting* and to *gullible*; and *trusting* would be considered to be opposite in meaning to *cautious, skeptical*).

Chapter Two: Methods

Study One

Participants

Participants were persons who were currently in or had previously received mental health treatment, obtained from MTurk, an online service where requesters recruit persons to complete tasks for financial compensation (Paolacci, Chandler, & Ipeirotis, 2010). Research has indicated that MTurk provides a broader age range than is obtained through traditional college samples. In addition, despite the rapid recruitment and less costly compensation, studies have also found that the data quality is equal to (if not more valid) than the data obtained through traditional methods (Buhrmester, Kwang, & Gosling, 2011; Chandler & Shapiro, 2016; Shapiro, Chandler, & Mueller, 2013). The integrity of findings is due in part to the fact that one can confine data collection to persons who have previously received high scores for quality of participation, which occurred in this data collection.

Participants were deleted if they had not adequately completed at least 80% of the FFF. In regards to participants failing to respond to a few scattered items, missing data were imputed using the expectation maximization (EM) procedure, which has been shown to produce more accurate estimates of population parameters than other methods, such as deletion of missing cases or mean substitution (Enders, 2006). A total of 48 participants (out of a total of 588) were deleted due to high validity scale scores. After these deletions, Study One consisted of 540 participants, comprising 322 females and 216 males (2 did not respond to this question). Participants had a mean age of 35.3 with a standard deviation of 11.6. With regard to ethnicity, 83.3% were White/Caucasian, 6.9%

were Black/African American, 3.7% were Hispanic/Latino, 3.9% were Asian, 0.4% were American Indian or Alaskan Native, 0.4% were Native Hawaiian or Pacific Islander, and 1.1% were other (2 individuals did not respond). With regard to marital status, 38.9% were single, 34.1% were married, 13.5% were cohabitating, 12.2% were divorced, and 1.1% were widowed (1 individual did not respond).

For Study One, individuals were asked to participate only if they were currently in or had previously received mental health treatment. Participants in mental health treatment were sampled in order to increase the likelihood that they would have maladaptive personality traits and to increase the likelihood of the results generalizing to clinical samples. Of the total sample, 166 participants indicated they were currently receiving mental health treatment and 160 noted they were currently taking psychotropic medication.

Materials

Five Factor Form Components. The FFF (Rojas & Widiger, 2014) is a one-page rating form, consisting of 30 items, with six items for each FFM domain and one item for each facet. FFF items are coded on a 1-5 point scale, where scores of 1 and 5 indicate a maladaptively extreme variant of each respective pole, scores of 2 and 4 are within the more normal range (albeit though in some cases still problematic), and a score 3 indicates that the person is "neutral." Scores of 1, 2, 4, and 5 are provided explicit anchors for each facet. For example, for the facet of trust, 1 = *cynical, suspicious*, 2 = *cautious, skeptical*, 3= *neutral*, 4 = *trusting*, and 5 = *gullible*. For the facet of competence, 1 = *disinclined, lax*, 2 = *casual*, 3 = *neutral*, 4 = *efficient, resourceful*, and 5 = *perfectionistic*.

In Study One, each of the four components of each item were administered as an independent item. For example, participants were instructed that "For each personality description, please indicate the degree to which you identify with the descriptors. Use the following format: Extremely Low, Low, Neither High Nor Low, High or Extremely High." For the facet of trust, "*cynical, suspicious,*" "*cautious, skeptical," "trusting,"* and *"gullible"* were each administered as separate, independent items, and participants indicated whether they were low or high on that respective component.

Demographics. Participants were asked demographic items such as age, ethnicity, and marital status. For Study One, participants were also assessed with respect to whether they were currently in mental health treatment and if they were currently receiving any psychotropic medication.

Careless Responding Scale. A previously developed five-item careless responding scale was administered (Gore & Widiger, 2013). Each item describes a behavior that is very unlikely to be true (e.g., "I am currently in the Guinness Book of World Records" and, reverse coded, "I have used a computer in the past 2 years"), thus an endorsement suggests the individual is not attending to the item's content. Items are rated on a 5 point Likert-type scale with response options of 1 = *disagree strongly*, 2 = *disagree a little*, 3 = *neither agree nor disagree*, 4 = *agree a little*, and 5 = *agree strongly*.

Procedure

Participants completed the demographic items and the 120 FFF (dismantled) items. This data collection was part of a larger study which included the BFI and select scales from the PID-5, EPA, FFDI, and FFOCI, that are not included in this dissertation.

The careless responding scale items were scattered throughout the data collection. Participants did not need to complete the entire set of items at one time, but it is estimated that study completion took about an hour. Participants received $1.00 for their time, consistent with MTurk reimbursement.

Study Two

Participants

Participants were again obtained from MTurk (Paolacci et al., 2010). However, for Study Two there was no requirement of any history of mental health treatment, as this history had no pertinent relevance or value for indicating the semantic similarity among the FFF item components. On the other hand, in this instance information was obtained with respect to the participant's educational background. Data for Study Two were collected across five separate samples with each data collection containing items from one domain of the FFF. Participants were instructed to rate the extent to which words or phrases from FFF were similar or different in meaning from one another.

Participants were again deleted if they had not adequately completed at least 80% of each of the FFF component comparisons. A total of 57 participants were deleted due to high validity scale scores (range includes 11 participants in the Extraversion data set to 18 participants in the Openness data set). After these deletions, Study Two consisted of 468 total participants, comprising 284 females and 184 males. The mean age of participants ranged from 35.7 with a standard deviation of 11.2 (Agreeableness) to 38.5 with a standard deviation of 13.5 (Neuroticism). With regard to ethnicity of the total sample, 75.6% were White/Caucasian, 6.0% were Black/African American, 5.8% were Hispanic/Latino, 10.0% were Asian, 0.4% were American Indian or Alaskan Native,

0.2% were Native Hawaiian or Pacific Islander, and 1.3% were other (3 individuals did not respond). With regard to marital status, 36.5% were single, 43.2% were married, 12.2% were cohabitating, 5.6% were divorced, and 1.7% were widowed (4 individuals did not respond). With regard to highest level of education completed of the total sample, 0.6% had less than high school, 8.1% were high school graduates (or GED), 21.6% had some college, 4.3% had completed vocational school, 10.0% had a 2-year college degree (associates), 35.9% had a 4-year college degree, 16.7% had a master's degree, 2.4% had a doctoral degree (Ph.D.), and 0.2% had a professional degree (M.D., J.D.) (1 individual did not respond).

Materials

Study Two included the 120 components of the 30 FFF items, a set of validity items, and a Demographics Questionnaire. The Demographics Questionnaire was the same as administered in Study One, with the exceptions that no information was obtained with respect to mental health treatment and participants were instead asked for their educational background.

Five Factor Form Components. There was a different format with respect to how the FFF item components were administered and rated. Participants were instructed, "Your task is to indicate, on a scale from 1 to 5, how similar or dissimilar is a word(s) or phrase to a series of five other words or phrases, where 5 = Very similar in meaning (i.e., a synonym or they mean the same); 4 = Similar in meaning; 3 = Neither similar nor dissimilar (i.e., they do not relate to one another); 2 = Dissimilar in meaning; 1 = Very dissimilar (an antonym or opposite in meaning)." They were also provided with an

option, “N/A = Do not know; Do not understand the meaning of a respective word or phrase.”

Each FFF item has four components. For each item of this questionnaire, each component was compared to the other three components, as well as two dummy components (the dummy components were obtained from other domains of the FFF for which there should be little to no similarity or dissimilarity in meaning). In addition, the order in which the three other components and two dummy components were compared to the target component varied across all of the 120 items of this questionnaire.

Note that there was redundancy in this data collection, in that there was 120 items, corresponding to each of the four components of the 30 FFF items. For example, for one item, “cynical, suspicious” was the target component, with comparisons to the other three components (e.g., “trusting), as well as the two dummy components. Then, for a subsequent item, “trusting” was the target component, with comparisons to the other three components (including “cynical, suspicious”), as well as two different dummy components. In sum, each component comparison was conducted twice, allowing for an assessment of the consistency or reliability, of the ratings.

Validity items. Staggered throughout the ratings of the FFF components was a set of items developed following the pilot study that involved the same task as the FFF components, but having a very clear, unambiguous meaning. The items asked participants to rate the similarity and/or dissimilarity in meaning of words for which their similarity and/or dissimilarity in meaning was considered to be relatively straightforward: “hot,” “warm,” “cold,” and “freezing.” Included as well were two dummy items “rapid” and “soft.” Items were presented with all possible combinations, consistent with the

presentation of the FFF components. Individuals who did not provide sufficiently valid ratings were eliminated from data analyses.

Procedure

Participants completed the demographic items, validity scale, and the 120 FFF items. Participants did not need to complete the entire set of items at one time, but it is estimated that study completion took about half an hour. Participants received $0.50 for their time, consistent with MTurk reimbursement.

Chapter Three: Results

Study One

The correlations among the four components for each of the 30 FFF items yields 180 correlations, 36 for each domain. To facilitate interpretation and minimize chance fluctuation, the results for each domain were averaged across the six facet items (Fisher's r to z transformations were used). Mean correlations among the components of each of the dismantled FFF domains are presented in Table 3.1. Due to the large sample size, correlations as small as .09 were statistically significant at the .05 level; therefore, results are reported with respect to magnitude of effect size (correlations .50 or above as large effect sizes; .30-.49 as medium effect sizes; weak effect sizes are not identified; Cohen, 1992).

Consistent with FFF scoring, positive correlations at a medium to large effect size were obtained between the maladaptive and adaptive high components for four out of the five FFF domains. A weak positive correlation was obtained for the domain of Extraversion. However, it should be noted although the average correlation for the components within Neuroticism were quite high (.70), the averaged correlations for Openness, Conscientiousness, and Agreeableness were close to weak (ranging from .31 to .36). Also consistent with FFF scoring, negative correlations at a medium effect size were obtained between the adaptive high and maladaptive low components for the two domains of Extraversion and Agreeableness. Finally, positive correlations of a medium effect size were obtained between the adaptive low and maladaptive low components for the three domains of Extraversion, Openness, and Agreeableness.

Inconsistent with FFF scoring, only one out of the five FFF domains obtained a negative correlation at a medium effect size for the relationship between the maladaptive high and adaptive low components (Neuroticism obtained a correlation of -.41). In addition, only one of the domains (Neuroticism) obtained a negative correlation of a medium effect size between the adaptive high and adaptive low components (-.42). Finally, none of the five domains obtained a medium (negative) effect size correlation between the maladaptive high and maladaptive low components.

Correlations for the dismantled FFF items were also examined at the item facet level (see Tables 3.2-3.6). When averaged across items, the results for Neuroticism suggested three instances in which the results were consistent with FFF scoring: maladaptive high with adaptive high (positive correlation), maladaptive high with adaptive low (negative correlation), and adaptive high with adaptive low (negative correlation). At the individual facet level, positive results were obtained for four to six of the six respective items for these instances (see Table 3.2). In those cases wherein the results were inconsistent with FFF score, the results were consistent with scoring for only three to none of the six facet items.

Table 3.3 provides the results for the Extraversion items. When averaged across items, the results for Extraversion suggested two instances in which the results were consistent with the FFF scoring: adaptive high to maladaptive low (negative correlation), and adaptive low to maladaptive low (positive correlation). At the individual facet level, positive results were obtained for four to five of the six respective items. In those cases wherein the results were inconsistent with FFF score, the results were consistent with the FFF scoring for four of the six items when considering the relationship of the

maladaptive high with adaptive high components; for only two items when considering the relationship of the adaptive high with the adaptive low components and maladaptive high with the maladaptive low components; and for none of the six items when considering the relationship of the maladaptive high with adaptive low.

Table 3.4 provides the results for the Openness items. When averaged across items, the results for Openness suggested two instances in which the results were consistent with the FFF scoring: maladaptive high with adaptive high (positive correlation) and adaptive low with maladaptive low (positive correlation). However, in all three cases the magnitude of the correlations were not strong, ranging from .31 to .38. When one considers the individual facet items, the weakness of the results perhaps become more apparent, in that the positive results were obtained for only four of the six respective items. In those cases wherein the results were inconsistent with FFF score, the results were consistent with scoring for only one to none of the six facet items.

Table 3.5 provides the results for the Agreeableness items. When averaged across items, the results for Agreeableness suggested three instances in which the results were consistent with the FFF scoring: maladaptive high with adaptive high (positive correlation), adaptive high with maladaptive low (negative correlation), and adaptive low with maladaptive low (positive correlation). However, in all three cases the magnitude of the correlations were not strong, ranging from -.33 to .40. When one considers the individual facet items, the weakness of the results perhaps become more apparent, in that the positive results were obtained for only three to four of the six respective items. In those cases wherein the results were inconsistent with FFF score, the results were consistent with scoring for only one to none of the six facet items.

Table 3.6 provides the results for the Conscientious items. When averaged across items, the results for Conscientiousness suggested one instance in which the results were consistent with the FFF scoring: maladaptive high with adaptive high (positive correlation). In those cases wherein the results were inconsistent with FFF score, the results were consistent with the FFF scoring for half of the six items when considering the relationship of the adaptive high with maladaptive low components; for only two items when considering the relationship of the adaptive low with the maladaptive low components; for one of the six items when considering the relationship of the adaptive high with the adaptive low components; and for none of the six items when considering the relationship of the maladaptive high with the adaptive low, or the relationship of the maladaptive high with the maladaptive low components.

Study Two

Table 3.7 provides the means (and standard deviations) for each validity component comparison (as well as the comparison with the dummy items). For example, 4.03 is the mean of the comparison of "hot" to its expected synonym, "warm." An omnibus F-test was first conducted (see last column), comparing all of the mean scores obtained for all of the four validity components. It is apparent from Table 3.7 that statistically significant differences were obtained among the four components for each of the validity items. Pairwise comparisons were then made for the component comparisons within each validity item. And, it is also apparent from Table 3.7 that all of the expected comparisons were statistically significant. The mean scores in Table 3.7 can also be interpreted with respect to their absolute values. Scores lower than 2.50 indicate that the two components were considered by the participants to be dissimilar and scores above

3.50 indicate that the two components were considered to be similar. All component comparisons meet this cutoff. This method of data analysis was then used to examine the means and standard deviations of the FFF domains.

The total number of potential component comparisons in these data collections was 480 (96 for each domain). To facilitate interpretation and minimize chance fluctuation, the results for each domain were again averaged across the six facet items within each domain (as well as the two dummy items). Table 3.8 provides the means (and standard deviations) for each component comparison (as well as the comparison with the dummy items). For instance, 4.21 is the mean of the comparison of each of the six maladaptive high components of neuroticism (e.g., "fearful, anxious," "rageful," and "depressed, suicidal") to its expected synonyms (i.e., the adaptive high components, such as "vigilant, worrisome, wary"), its expected maladaptive antonyms (i.e., the maladaptive low components, such as "oblivious to signs of threat"), and its expected adaptive antonym (i.e., the adaptive low components, such as "relaxed calm"). Note, again, the redundancy within Table 3.8 in that (for instance) "fearful, anxious" was compared to its expected synonym (i.e., "vigilant, worrisome, wary") and "vigilant, worrisome, wary" was compared to its expected synonym (i.e., "fearful, anxious").

An omnibus F-test was conducted (see last column), comparing all of the mean scores obtained for all of the four components within each domain. It is apparent from Table 3.8 that statistically significant differences were obtained among the four components for each of the five domains. Pairwise comparisons were then made for the component comparisons within each domain. And, it is also apparent from Table 3.8 that all of the expected comparisons were statistically significant.

The mean scores in Table 3.8 were then interpreted with respect to their absolute values. Only four component comparisons did not meet the previously defined cutoff: Neuroticism adaptive low was not considered to be similar to Neuroticism maladaptive low; Openness adaptive high was not considered to be similar with maladaptive high; nor was Openness adaptive low considered to be similar to maladaptive low; and, finally, Openness maladaptive low was not considered to be similar to adaptive low. It should be noted though that two of these four similarity comparisons were above the threshold when the same two components were compared in the reverse direction. That is, Neuroticism maladaptive low was considered to be similar to Neuroticism adaptive low and Openness maladaptive high was considered to be similar to Openness adaptive high. In addition, for every domain, all of the respective components on one pole of the FFF were considered to be dissimilar in meaning to the components on the opposite pole (i.e. maladaptive high components were always considered to be dissimilar in meaning to the adaptive low as well as to the maladaptive low; and adaptive high was always considered to be dissimilar in meaning to both the adaptive low and the maladaptive low components).

The component comparisons of the FFF were then examined for each domain. Table 3.9 provides the results for the individual 24 components of the FFF Neuroticism items. The omnibus F-test was significant for all 24 components and the expected pairwise comparisons were all statistically significant. With respect to the absolute values of the comparisons, 91 of the 96 component comparisons (95%) met the cutoff expectations. The five exceptions were that “relaxed, calm” was not considered to be similar to “oblivious to signs of threat” (adaptive low, $M = 3.28$); “oblivious to signs of

threat" was not considered to be similar to "relaxed, calm" (maladaptive low, *M* = 3.45); "even-tempered" was not considered to be similar to "won't even protest exploitation" (adaptive low, *M* = 3.31); "self-assured, charming" was not considered to be similar to "glib, shameless" (adaptive low, *M* = 3.20); and "resilient" was not considered to be similar to "fearless, feels invincible" (adaptive low, *M* = 3.36). It should be noted that three redundant comparisons of these components did meet the cutoff requirements; "won't even protest exploitation" was considered to be similar to "even-tempered" (*M* = 3.60); "glib, shameless" was considered to be similar to "self-assured, charming" (*M* = 3.72); and "fearless, feels invincible" was considered to be similar to "resilient" (*M* = 3.62). In addition, although "oblivious to signs of threat" was not above the threshold to be considered similar to "relaxed, calm" (*M* = 3.45), its mean score was significantly higher than the dissimilarity scores obtained in its comparison to the components at the opposite pole (i.e., "vigilant, worrisome, wary" [*M* = 1.90] and "fearful, anxious" [*M* = 1.87]).

Table 3.10 provides the results for the individual 24 components of the FFF Extraversion items. The omnibus F-test was significant for all 24 components and the expected pairwise comparisons were all statistically significant. With respect to the absolute values of the comparisons, 84 of the 96 component comparisons (88%) did met the cutoff expectations.

The results were weaker for the Openness items (see Table 3.11). The omnibus F-test was statistically insignificant for six of the 24 FFF components: "intense, in turmoil," "self-aware, expressive," "minimal aesthetic interests," "constricted, blunted," "pragmatic," and "alexithymic." However, it should also be noted that four of these six

failures concern just one of the six FFF Openness items: Feelings. The FFF Feelings item includes the four components of "alexithymic" (maladaptive low), "constricted, blunted" (adaptive low), "self-aware expressive" (adaptive high), and "intense, in turmoil" (maladaptive high). The current results clearly fail to support the structure of this item (albeit the results did at least demonstrate a replication of this finding no matter the order in which the comparison was conducted). Of the remaining 72 component comparisons, 56 met the cutoff expectations (78%).

Table 3.12 provides the results for the individual 24 components of the FFF Agreeableness items. The results were consistent across all 24 components, with little to no deviation from expectations. The omnibus F-test was significant for all 24 components and the expected pairwise comparisons were all statistically significant. For example, the mean score for "confident, self-assured" (M = 3.47) was significantly higher than the dissimilarity scores obtained in its comparison to the components at the opposite pole (i.e., "humble, modest, unassuming" [M = 2.48] and "self-effacing, self-denigrating" [M = 2.43]). With respect to the absolute values of the comparisons,93 of the 96 component comparisons met the cutoff expectations (97%). The three exceptions were "frugal, withholding" was not considered to be similar to "greedy, self-centered, exploitative" (adaptive low, M = 3.41); "confident, self-assured" was not considered to be similar to "boastful, vain, pretentious, arrogant" (adaptive low, M = 3.47); and "humble, modest, unassuming" was not considered to be dissimilar to "confident, self-assured" (adaptive high, M = 2.61). It should be noted again though that the redundant comparisons of these components did meet the cutoff requirements; "boastful, vain, pretentious, arrogant" was considered to be similar to "confident, self-assured" (maladaptive low, M = 3.64);

"greedy, self-centered, exploitative" was considered to be similar in meaning to "frugal, withholding" (maladaptive low, $M = 3.58$); and "confident, self-assured" was considered to be dissimilar to "humble, modest, unassuming" (adaptive low, $M = 2.48$).

Table 3.13 provides the results for the individual 24 components of the FFF Conscientiousness items. The omnibus F-test was significant for all 24 components and the expected pairwise comparisons were all statistically significant. With respect to the absolute values of the comparisons, 89 of the 96 component comparisons met the cutoff expectations (93%). The seven exceptions were "thoughtful, reflective, circumspect" was not considered to be similar to ruminative, indecisive" (adaptive high, $M = 2.83$); "easy-going, capricious" was not considered to be similar to "irresponsible, undependable, immoral" or dissimilar to dependable, reliable, responsible" (adaptive low, $M = 2.98$, $M = 2.80$ respectively) and "irresponsible, undependable, immoral" was not considered similar to "easy-going, capricious" (maladaptive low, $M = 3.10$); "carefree, content" was not considered to be similar to "aimless, shiftless, desultory" (adaptive low, $M = 3.38$); "leisurely" was not considered to be similar to "negligent, hedonistic" (adaptive low, $M = 3.09$); and "casual" was not considered to be dissimilar to "efficient, resourceful" (adaptive low, $M = 2.73$). The remaining 89 comparisons were consistent with FFF scoring.

Table 3.1. Mean Correlations among the Dismantled FFF Domain Components

	Adaptive High	Adaptive Low	Maladaptive Low
Neuroticism			
Maladaptive High	***.70***	***-.41***	.02
Adaptive High		***-.42***	-.02
Adaptive Low			.25
Extraversion			
Maladaptive High	.28	-.03	.13
Adaptive High		-.20	***-.43***
Adaptive Low			***.40***
Openness			
Maladaptive High	***.31***	-.03	.05
Adaptive High		-.06	-.07
Adaptive Low			***.38***
Agreeableness			
Maladaptive High	***.35***	-.04	-.00
Adaptive High		-.07	***-.33***
Adaptive Low			***.40***
Conscientiousness			
Maladaptive High	***.32***	-.05	.08
Adaptive High		.10	-.23
Adaptive Low			.29

Note. n = 540; FFF = Five Factor Form (Rojas & Widiger, 2014); Large effect size relationships (.50 or above; Cohen, 1992) are indicated by bold and underline; medium effect size (.30-.49) by bold and italics.

Table 3.2. Correlations among the Dismantled FFF Neuroticism Components

	Adaptive High	Adaptive Low	Maladaptive Low
Maladaptive High			
Fearful, Anxious	**.74**	**-.63**	.08
Rageful	**.68**	***-.39***	.20
Depressed, suicidal	**.65**	***-.47***	-.06
Uncertain of self, ashamed	**.78**	***-.42***	.10
Unable to resist impulses	**.67**	-.20	.04
Helpless, overwhelmed	**.69**	***-.34***	-.20
Adaptive High			
Vigilant, worrisome, wary		**-.61**	.02
Brooding, resentful, defiant		***-.38***	.18
Pessimistic, discouraged		**-.57**	-.13
Self-conscious, embarrassed		***-.45***	.04
Self-indulgent		-.19	-.00
Vulnerable		-.27	-.15
Adaptive Low			
Relaxed, calm			.02
Even-tempered			.02
Not easily discouraged			.26
Self-assured, charming			***.31***
Restrained			***.48***
Resilient			***.40***
Maladaptive Low			
Oblivious to signs of threat			
Won't even protest exploitation			
Unrealistic, overly optimistic			
Glib, shameless			
Overly restrained			
Fearless, feels invincible			

Note. n = 540; FFF = Five Factor Form (Rojas & Widiger, 2014); Large effect size relationships (.50 or above; Cohen, 1992) are indicated by bold and underline; medium effect size (.30-.49) by bold and italics.

Table 3.3. Correlations among the Dismantled FFF Extraversion Components

	Adaptive High	Adaptive Low	Maladaptive Low
Maladaptive High			
Intense Attachments	***.32***	-.12	-.08
Attention-Seeking	***.32***	-.08	-.03
Dominant, Pushy	**.69**	-.18	-.09
Frantic	-.05	.21	***.33***
Reckless, Foolhardy	***.33***	-.17	.22
Melodramatic, Manic	-.02	.15	***.41***
Adaptive High			
Affectionate, Warm		-.15	**-.59**
Sociable, Outgoing, Personable		.23	**-.58**
Assertive Forceful		-.27	-.18
Energetic		***-.42***	***-.48***
Adventurous		-.28	-.25
High-spirited, Cheerful, Joyful		***-.32***	***-.46***
Adaptive Low			
Formal, Reserved			***.37***
Independent			-.13
Passive			**.58**
Slow-Paced			**.65**
Cautious			***.30***
Placid, Sober, Serious			**.50**
Maladaptive Low			
Cold, Distant			
Socially withdrawn, Isolated			
Resigned, Uninfluential			
Lethargic, Sedentary			
Dull, Listless			
Grim, Anhedonic			

Note. n = 540; FFF = Five Factor Form (Rojas & Widiger, 2014); Large effect size relationships (.50 or above; Cohen, 1992) are indicated by bold and underline; medium effect size (.30-.49) by bold and italics.

Table 3.4. Correlations among the Dismantled FFF Openness Components

	Adaptive High	Adaptive Low	Maladaptive Low
Maladaptive High			
Unrealistic, lives in fantasy	***.38***	***-.48***	***-.35***
Bizarre interests	***.34***	.09	.14
Intense, in turmoil	-.00	***.44***	.29
Eccentric	**.63**	-.19	-.02
Peculiar, weird	***.30***	.13	.10
Radical	.18	-.18	.19
Adaptive High			
Imaginative		-.12	-.09
Aesthetic interests		-.25	-.14
Self-aware, expressive		-.04	.02
Unconventional		-.18	-.01
Creative, curious		.25	-.16
Open, flexible		-.03	-.07
Adaptive Low			
Practical, realistic			**.60**
Minimal aesthetic interests			.29
Constricted, blunted			***.42***
Predictable			***.42***
Pragmatic			.14
Traditional			***.32***
Maladaptive Low			
Concrete			
Disinterested			
Alexithymic			
Mechanized, stuck in routine			
Closed-minded			
Dogmatic, moralistically intolerant			

Note. n = 540; FFF = Five Factor Form (Rojas & Widiger, 2014); Large effect size relationships (.50 or above; Cohen, 1992) are indicated by bold and underline; medium effect size (.30-.49) by bold and italics.

Table 3.5. Correlations among the Dismantled FFF Agreeableness Components

	Adaptive High	Adaptive Low	Maladaptive Low
Maladaptive High			
Gullible	***.31***	-.14	-.05
Guileless	.03	.23	.23
Self-sacrificial, selfless	**.57**	-.06	-.26
Yielding, subservient, meek	***.40***	.16	.09
Self-effacing, self-denigrating	.13	***-.35***	.12
Overly soft-hearted	**.60**	-.09	-.14
Adaptive High			
Trusting		***-.47***	**-.53**
Honest, forthright		.13	***-.38***
Giving, generous		-.15	***-.39***
Cooperative, obedient, deferential		-.05	-.10
Humble, modest, unassuming		.06	-.25
Empathic, sympathetic, gentle		.08	***-.33***
Adaptive Low			
Cautious, skeptical			**.67**
Savvy, cunning, shrewd			***.39***
Frugal, withholding			.29
Critical, contrary			**.54**
Confident, self-assured			.27
Strong, tough			.20
Maladaptive Low			
Cynical, suspicious			
Deceptive, dishonest, manipulative			
Greedy, self-centered, exploitative			
Combative, aggressive			
Boastful, vain, pretentious, arrogant			
Callous, merciless, ruthless			

Note. n = 540; FFF = Five Factor Form (Rojas & Widiger, 2014); Large effect size relationships (.50 or above; Cohen, 1992) are indicated by bold and underline; medium effect size (.30-.49) by bold and italics

Table 3.6. Correlations among the Dismantled FFF Conscientiousness Components

	Adaptive High	Adaptive Low	Maladaptive Low
Maladaptive High			
Perfectionistic	***.33***	-.01	.03
Preoccupied w/organization	**.60**	-.22	-.11
Rigidly principled	.19	-.00	.09
Workaholic, acclaim-seeking	***.45***	.09	.04
Single-minded doggedness	.16	.02	.13
Ruminative, indecisive	.13	-.18	.29
Adaptive High			
Efficient, resourceful		***.32***	-.07
Organized, methodical		**-.50**	***-.39***
Dependable, reliable, responsible		***.35***	***-.36***
Purposeful, diligent, ambitious		***.35***	***-.30***
Self-disciplined, willpower		.01	-.22
Thoughtful, reflective, circumspect		.08	-.06
Adaptive Low			
Casual			.21
Disorganized			**.78**
Easy-going, capricious			-.08
Carefree, content			-.00
Leisurely			.21
Quick to make decisions			***.42***
Maladaptive Low			
Disinclined, lax			
Careless, sloppy, haphazard			
Irresponsible, undependable, immoral			
Aimless, shiftless, desultory			
Negligent, hedonistic			
Hasty, rash			

Note. n = 540; FFF = Five Factor Form (Rojas & Widiger, 2014); Large effect size relationships (.50 or above; Cohen, 1992) are indicated by bold and underline; medium effect size (.30-.49) by bold and italics.

Table 3.7. Means and Standard Deviations of Similarity and Dissimilarity for Validity Item Components

	Synonym *M* (SD)	Antonym Adaptive *M* (SD)	Antonym Maladaptive *M* (SD)	Dummy *M* (SD)	F-Value
Hot	4.03 (.67)[a]	1.43 (.86)[b]	1.33 (.82)[b]	2.81 (.64)[c]	763.43*
Warm	4.14 (.72)[a]	1.46 (.83)[b]	1.47 (.88)[b]	2.72 (.67)[c]	611.44*
Cold	4.26 (.95)[a]	1.77 (.95)[b]	1.30 (.83)[c]	2.73 (.66)[d]	545.94*
Freezing	4.44 (.71)[a]	1.65 (.82)[b]	1.33 (.84)[c]	2.82 (.68)[d]	758.96*
Overall Mean	4.22 (.51)[a]	1.58 (.72)[b]	1.37 (.75)[c]	2.77 (.57)[d]	887.41*

Note. n = 367. * = p < .001. Means separated by a different superscript (e.g. a, b, c, d) were significantly different p < .001.

Table 3.8. Means and Standard Deviations of Similarity and Dissimilarity for FFF Components Averaged across Items within each Domain

	Synonym *M* (SD)	Antonym Adaptive *M* (SD)	Antonym Maladaptive *M* (SD)	Dummy *M* (SD)	F-Value
Neuroticism					
Maladaptive High mean	4.21 (.62)[a]	1.65 (.88)[b]	1.79 (.94)[b]	2.46 (.82)[c]	138.98*
Adaptive High mean	4.15 (.72)[a]	1.75 (.87)[b]	1.72 (.92)[b]	2.53 (.88)[c]	118.91*
Adaptive Low mean	3.43 (.69)[a]	1.74 (.91)[b]	1.70 (.88)[b]	2.85 (.63)[c]	101.54*
Maladaptive Low mean	3.68 (.77)[a]	1.82 (.88)[b]	1.78 (.93)[b]	2.64 (.78)[c]	81.78*
Overall Mean	3.87 (.55)[a]	1.74 (.84)[b]	1.75 (.86)[b]	2.62 (.73)[c]	126.96*
Extraversion					
Maladaptive High mean	4.01 (.48)[a]	1.75 (.60)[b]	1.89 (.65)[c]	2.91 (.40)[d]	221.14*
Adaptive High mean	3.73 (.53)[a]	1.79 (.54)[b]	1.56 (.71)[c]	2.75 (.49)[d]	163.57*
Adaptive Low mean	3.64 (.46)[a]	1.89 (.59)[b]	1.89 (.51)[b]	2.83 (.41)[c]	165.19*
Maladaptive Low mean	3.85 (.53)[a]	1.49 (.68)[b]	1.97 (.68)[c]	2.76 (.47)[d]	194.81*
Overall Mean	3.80 (.40)[a]	1.74 (.54)[b]	1.83 (.58)[c]	2.81 (.39)[d]	229.88*
Openness					
Maladaptive High mean	3.50 (.49)[a]	2.32 (.64)[b]	2.39 (.59)[b]	2.89 (.51)[c]	81.98*
Adaptive High mean	3.41 (.57)[a]	2.29 (.74)[b]	2.10 (.65)[c]	2.68 (.58)[d]	69.67*
Adaptive Low mean	3.28 (.63)[a]	2.39 (.72)[b]	2.27 (.67)[b]	2.77 (.51)[c]	42.05*
Maladaptive Low mean	3.42 (.67)[a]	2.20 (.66)[b]	2.45 (.67)[c]	2.80 (.55)[d]	54.94*
Overall Mean	3.40 (.56)[a]	2.30 (.59)[b]	2.31 (.52)[b]	2.78 (.46)[c]	82.77*
Agreeableness					
Maladaptive High mean	4.28 (.55)[a]	2.17 (.86)[b]	1.79 (1.03)[c]	2.84 (.68)[d]	95.55*
Adaptive High mean	3.95 (.81)[a]	2.15 (.78)[b]	1.63 (.96)[c]	2.85 (.68)[d]	94.49*
Adaptive Low mean	3.63 (.59)[a]	2.22 (.91)[b]	2.23 (.89)[b]	2.92 (.62)[c]	47.05*
Maladaptive Low mean	3.81 (.63)[a]	1.73 (1.01)[b]	2.03 (1.00)[c]	2.95 (.63)[d]	84.08*
Overall Mean	3.91 (.51)[a]	2.07 (.81)[b]	1.92 (.91)[c]	2.89 (.59)[d]	85.83*
Conscientiousness					
Maladaptive High mean	4.09 (.51)[a]	1.87 (.66)[b]	1.77 (.71)[b]	2.86 (.43)[c]	155.44*
Adaptive High mean	3.70 (.56)[a]	2.08 (.56)[b]	1.59 (.66)[c]	2.84 (.49)[d]	145.01*
Adaptive Low mean	3.61 (.58)[a]	2.31 (.66)[b]	2.02 (.65)[c]	2.77 (.48)[d]	78.71*
Maladaptive Low mean	3.80 (.54)[a]	1.70 (.67)[b]	1.99 (.68)[c]	2.76 (.52)[d]	135.07*
Overall Mean	3.79 (.40)[a]	1.99 (.56)[b]	1.85 (.61)[c]	2.81 (.40)[d]	153.51*

Note. Neuroticism n = 101, Extraversion n = 95, Openness n = 94, Agreeableness n = 89, Conscientiousness n = 89. * = $p < .001$. Means separated by a different superscript (e.g. a, b, c, d) were significantly different $p < .001$. FFF = Five Factor Form (Rojas & Widiger, 2014).

Table 3.9. Means and Standard Deviations of Similarity and Dissimilarity for FFF Neuroticism Item Components

	Synonym *M* (SD)	Antonym Adaptive *M* (SD)	Antonym Maladaptive *M* (SD)	Dummy *M* (SD)	F-Value
Maladaptive High					
Fearful, Anxious	4.35 (.80)[a]	1.50 (1.14)[b]	2.00 (1.27)[c]	2.41 (.98)[c]	112.10*
Rageful	4.21 (.87)[a]	1.51 (1.05)[b]	1.81 (1.11)[b]	2.27 (.94)[c]	116.68*
Depressed, suicidal	4.07 (.95)[a]	1.91 (1.03)[b]	1.66 (1.06)[b]	2.32 (.99)[c]	88.01*
Uncertain of self, ashamed	4.33 (1.05)[a]	1.55 (1.02)[b]	1.75 (1.22)[b]	2.55 (.93)[c]	84.57*
Unable to resist impulses	4.02 (1.27)[a]	1.64 (1.15)[b]	1.55 (1.18)[b]	2.56 (.91)[c]	52.38*
Helpless, overwhelmed	4.27 (.94)[a]	1.77 (1.04)[b]	1.91 (1.33)[b]	2.64 (.89)[c]	92.60*
Maladaptive High mean	4.21 (.62)[a]	1.65 (.88)[b]	1.79 (.94)[b]	2.46 (.82)[c]	138.98*
Adaptive High					
Vigilant, worrisome, wary	4.43 (1.01)[a]	1.46 (.93)[b]	1.78 (1.17)[b]	2.51 (1.01)[c]	104.67*
Brooding, resentful, defiant	4.00 (1.03)[a]	1.70 (.99)[b]	1.99 (1.14)[b]	2.43 (.96)[c]	74.44*
Pessimistic, discouraged	3.83 (.97)[a]	1.75 (1.16)[b]	1.57 (1.09)[b]	2.62 (.94)[c]	73.03*
Self-conscious, embarrassed	4.23 (1.16)[a]	1.70 (1.18)[b]	1.92 (1.32)[b]	2.51 (.97)[c]	51.17*
Self-indulgent	4.25 (1.06)[a]	1.79 (1.16)[b]	1.58 (1.08)[b]	2.52 (.95)[c]	94.00*
Vulnerable	4.18 (1.03)[a]	2.07 (1.13)[b]	1.51 (.97)[c]	2.60 (.98)[d]	115.66*
Adaptive High mean	4.15 (.72)[a]	1.75 (.87)[b]	1.72 (.92)[b]	2.53 (.88)[c]	118.91*
Adaptive Low					
Relaxed, calm	3.28 (1.24)[a]	1.69 (1.08)[b]	1.61 (1.19)[b]	3.12 (.68)[a]	65.78*
Even-tempered	3.31 (1.06)[a]	1.71 (1.03)[b]	1.55 (.99)[b]	2.76 (.84)[c]	49.80*
Not easily discouraged	3.54 (1.21)[a]	1.72 (1.22)[b]	2.13 (1.16)[c]	2.85 (.79)[d]	43.41*
Self-assured, charming	3.20 (1.27)[a]	1.70 (1.18)[b]	1.55 (1.05)[b]	2.59 (.91)[c]	46.79*
Restrained	3.89 (1.11)[a]	1.63 (1.02)[b]	1.60 (1.14)[b]	2.79 (.79)[c]	76.89*
Resilient	3.36 (1.24)[a]	1.92 (1.08)[b]	1.76 (1.00)[b]	2.98 (.87)[a]	45.58*
Adaptive Low mean	3.43 (.69)[a]	1.74 (.91)[b]	1.70 (.88)[b]	2.85 (.63)[c]	101.54*
Maladaptive Low					
Oblivious to signs of threat	3.45 (1.20)[a]	1.90 (1.25)[b]	1.87 (1.26)[b]	2.77 (.85)[c]	25.62*
Won't even protest exploitation	3.60 (1.14)[a]	2.13 (1.13)[b]	1.96 (1.14)[b]	2.65 (.88)[c]	35.54*
Unrealistic, overly optimistic	3.72 (1.33)[a]	1.50 (1.02)[b]	1.91 (1.11)[c]	2.61 (.97)[d]	63.60*
Glib, shameless	3.72 (1.22)[a]	1.62 (1.03)[b]	1.67 (1.21)[b]	2.63 (.86)[c]	56.72*
Overly restrained	3.97 (1.07)[a]	1.91 (1.25)[b]	1.68 (1.26)[b]	2.48 (.94)[c]	49.86*
Fearless, feels invincible	3.62 (1.08)[a]	1.84 (1.18)[b]	1.58 (1.02)[b]	2.68 (.99)[c]	61.88*
Maladaptive Low mean	3.68 (.77)[a]	1.82 (.88)[b]	1.78 (.93)[b]	2.64 (.78)[c]	81.78*
Overall Mean	3.87 (.55)[a]	1.74 (.84)[b]	1.75 (.86)[b]	2.62 (.73)[c]	126.96*

Note. n = 101. * = p < .001. Means separated by a different superscript (e.g. a, b, c, d) were significantly different p < .001. FFF = Five Factor Form (Rojas & Widiger, 2014).

Table 3.10. Means and Standard Deviations of Similarity and Dissimilarity for FFF Extraversion Components

	Synonym *M* (SD)	Antonym Adaptive *M* (SD)	Antonym Maladaptive *M* (SD)	Dummy *M* (SD)	F-Value
Maladaptive High					
Intense Attachments	4.13 (.78)[a]	2.26 (.93)[b]	1.51 (.92)[c]	3.03 (.74)[d]	123.27*
Attention-Seeking	3.85 (.88)[a]	2.19 (1.06)[b]	1.58 (1.05)[c]	2.95 (.57)[d]	75.80*
Dominant, Pushy	4.79 (.64)[a]	1.28 (.78)[b]	1.78 (.88)[c]	2.84 (.50)[d]	273.40*
Frantic	4.17 (.82)[a]	1.44 (.81)[b]	1.72 (1.04)[b]	3.02 (.67)[c]	150.92*
Reckless, Foolhardy	3.96 (.85)[a]	1.25 (.58)[b]	2.28 (.90)[c]	3.05 (.56)[d]	231.16*
Melodramatic, Manic	3.17 (.85)[a]	2.08 (1.16)[b]	2.55(1.06)[ac]	2.58 (.68)[c]	11.73*
Maladaptive High mean	4.01 (.48)[a]	1.75 (.60)[b]	1.89 (.65)[c]	2.91 (.40)[d]	221.14*
Adaptive High					
Affectionate, Warm	3.76 (.89)[a]	1.78 (.86)[b]	1.28 (.77)[c]	2.69 (.68)[d]	148.33*
Sociable, Outgoing, Personable	3.59 (.87)[a]	2.96 (.87)[b]	1.36 (.91)[c]	3.00 (.63)[b]	94.17*
Assertive Forceful	4.60 (.82)[a]	1.51 (.92)[b]	1.77 (.94)[b]	2.72 (.69)[c]	141.40*
Energetic	3.86 (.96)[a]	1.48 (.82)[b]	1.51 (1.01)[b]	2.77 (.56)[c]	120.63*
Adventurous	3.75 (.89)[a]	1.53 (.73)[b]	1.88 (.80)[c]	2.80 (.66)[d]	105.44*
High-spirited, Cheerful, Joyful	2.79 (1.12)[a]	1.49 (.68)[b]	1.53 (.91)[b]	2.52 (.67)[a]	53.74*
Adaptive High mean	3.73 (.53)[a]	1.79 (.54)[b]	1.56 (.71)[c]	2.75 (.49)[d]	163.57*
Adaptive Low					
Formal, Reserved	3.97 (.93)[a]	1.82 (.86)[b]	2.34 (.80)[c]	2.73 (.61)[d]	58.71*
Independent	3.05 (1.07)[ab]	2.98 (.98)[a]	2.54 (.87)[b]	2.98 (.64)[a]	9.95*
Passive	3.91 (1.02)[a]	1.55 (1.04)[b]	1.29 (.65)[b]	2.82 (.60)[c]	169.37*
Slow-Paced	4.14 (.92)[a]	1.52 (.86)[b]	1.47 (.79)[b]	2.86 (.59)[c]	145.62*
Cautious	3.21 (.97)[a]	1.74 (.87)[b]	1.32 (.75)[c]	2.71 (.60)[d]	120.11*
Placid, Sober, Serious	3.53 (1.09)[a]	2.70 (.93)[b]	2.37 (1.12)[c]	2.94 (.45)[d]	52.64*
Adaptive Low mean	3.64 (.46)[a]	1.89 (.59)[b]	1.89 (.51)[b]	2.83 (.41)[c]	165.19*
Maladaptive Low					
Cold, Distant	3.94 (.88)[a]	1.19 (.51)[b]	2.33 (.94)[c]	2.67 (.63)[d]	311.22*
Socially withdrawn, Isolated	3.31 (.87)[a]	1.38 (.99)[b]	1.70 (.89)[b]	2.81 (.55)[c]	79.97*
Resigned, Uninfluential	4.00 (1.17)[a]	1.62 (1.03)[b]	1.60 (.95)[b]	2.76 (.62)[c]	73.35*
Lethargic, Sedentary	4.37 (.72)[a]	1.42 (.91)[b]	1.52 (.96)[b]	2.93 (.50)[c]	158.63*
Dull, Listless	3.43 (.90)[a]	1.84 (1.03)[b]	2.14 (1.08)[bc]	2.46 (.65)[c]	42.90*
Grim, Anhedonic	4.10 (.78)[a]	1.47 (.82)[b]	2.58 (1.21)[c]	2.96 (.65)[c]	125.53*
Maladaptive Low mean	3.85 (.53)[a]	1.49 (.68)[b]	1.97 (.68)[c]	2.76 (.47)[d]	194.81*
Overall Mean	3.80 (.40)[a]	1.74 (.54)[b]	1.83 (.58)[c]	2.81 (.39)[d]	229.88*

Note. n = 95. * = $p < .001$. Means separated by a different superscript (e.g. a, b, c, d) were significantly different $p < .001$. FFF = Five Factor Form (Rojas & Widiger, 2014).

Table 3.11. Means and Standard Deviations of Similarity and Dissimilarity for FFF Openness Components

	Synonym *M* (SD)	Antonym Adaptive *M* (SD)	Antonym Maladaptive *M* (SD)	Dummy *M* (SD)	F-Value
Maladaptive High					
Unrealistic, lives in fantasy	4.09 (1.01)[a]	1.19 (1.40)[b]	2.09 (1.11)[b]	3.07 (.87)[c]	47.93*
Bizarre interests	3.07 (1.00)[a]	2.64 (.98)[ab]	2.27 (.95)[b]	2.71 (.79)[a]	9.64*
Intense, in turmoil	2.78 (1.08)	3.04 (1.04)	2.94 (.94)	2.94 (.76)	1.31
Eccentric	4.22 (1.08)[a]	2.01 (1.01)[b]	2.07 (.88)[b]	2.95 (.62)[c]	56.83*
Peculiar, weird	3.76 (.94)[a]	2.59 (1.09)[b]	2.40 (.87)[b]	2.68 (.82)[b]	34.40*
Radical	3.14 (.99)[a]	1.76 (1.16)[b]	2.94 (1.24)[a]	2.98 (.61)[a]	35.50*
Maladaptive High mean	3.50 (.49)[a]	2.32 (.64)[b]	2.39 (.59)[b]	2.89 (.51)[c]	81.98*
Adaptive High					
Imaginative	3.97 (1.16)[a]	2.10 (1.07)[b]	2.01 (.96)[b]	2.82 (.77)[c]	44.66*
Aesthetic interests	3.24 (1.03)[a]	2.71 (1.28)[ab]	2.42 (.93)[b]	2.60 (.80)[b]	8.72*
Self-aware, expressive	2.68 (.97)	2.19 (.99)	2.74 (1.02)	2.67 (.75)	.76
Unconventional	4.05 (1.02)[a]	1.94 (1.05)[b]	2.15 (1.08)[bc]	2.53 (.73)[c]	64.24*
Creative, curious	3.45 (.98)[a]	2.50 (1.04)[b]	1.83 (.97)[c]	2.90 (.72)[d]	33.58*
Open, flexible	3.15 (.94)[a]	2.39 (1.04)[b]	1.96 (1.10)[c]	2.54 (.76)[b]	20.66*
Adaptive High mean	3.41 (.57)[a]	2.29 (.74)[b]	2.10 (.65)[c]	2.68 (.58)[d]	69.67*
Adaptive Low					
Practical, realistic	3.39 (1.08)[a]	2.19 (1.09)[b]	1.60 (1.08)[c]	2.65 (.71)[d]	36.72*
Minimal aesthetic interests	2.80 (1.06)	2.74 (1.37)	2.72 (.99)	2.71 (.61)	.26
Constricted, blunted	2.89 (1.04)	2.41 (1.05)	3.00 (1.02)	2.92 (.74)	2.27
Predictable	3.96 (1.14)[a]	2.11 (1.07)[b]	2.21 (.94)[b]	2.79 (.68)[c]	43.38*
Pragmatic	2.99 (1.02)	2.63 (.93)	2.55 (.80)	2.71 (.71)	4.11
Traditional	3.29 (1.02)[a]	2.30 (.96)[b]	1.65 (1.04)[c]	2.88 (.63)[a]	50.97*
Adaptive Low mean	3.28 (.63)[a]	2.39 (.72)[b]	2.27 (.67)[b]	2.77 (.51)[c]	42.05*
Maladaptive Low					
Concrete	3.53 (1.04)[a]	2.29 (.81)[b]	2.05 (.95)[b]	2.91 (.67)[c]	29.91*
Disinterested	3.10 (1.05)[a]	2.49 (.86)[bc]	2.45 (.98)[c]	2.78 (.67)[ab]	9.77*
Alexithymic	3.11 (1.02)	2.50 (1.33)	3.04 (.99)	2.87 (.78)	2.50
Mechanized, stuck in routine	4.18 (1.09)[a]	2.04 (.99)[b]	2.22 (1.03)[b]	3.05 (.70)[c]	64.61*
Closed-minded	3.06 (1.02)[a]	2.02 (1.04)[b]	2.63 (.98)[a]	2.67 (.82)[a]	22.94*
Dogmatic, moralistically intolerant	3.28 (1.10)[a]	2.05 (1.14)[b]	2.67 (1.17)[ac]	2.59 (.69)[c]	16.02*
Maladaptive Low mean	3.42 (.67)[a]	2.20 (.66)[b]	2.45 (.67)[c]	2.80 (.55)[d]	54.94*
Overall Mean	3.40 (.56)[a]	2.30 (.59)[b]	2.31 (.52)[b]	2.78 (.46)[c]	82.77*

Note. n = 94. * = p < .001. Means separated by a different superscript (e.g. a, b, c, d) were significantly different p < .001. FFF = Five Factor Form (Rojas & Widiger, 2014).

Table 3.12. Means and Standard Deviations of Similarity and Dissimilarity for FFF Agreeableness Components

	Synonym *M* (SD)	Antonym Adaptive *M* (SD)	Antonym Maladaptive *M* (SD)	Dummy *M* (SD)	F-Value
Maladaptive High					
Gullible	4.15 (1.12)[a]	1.94 (1.15)[b]	1.90 (1.31)[b]	2.79 (.92)[c]	39.14*
Guileless	4.13 (1.11)[a]	2.11 (1.10)[b]	1.96 (1.44)[b]	3.09 (.60)[c]	30.53*
Self-sacrificial, selfless	4.55 (.81)[a]	2.32 (1.08)[b]	1.65 (1.22)[c]	2.78 (.86)[d]	90.37*
Yielding, subservient, meek	4.39 (.75)[a]	2.25 (1.10)[b]	1.77 (1.20)[c]	2.69 (.82)[d]	83.85*
Self-effacing, self-denigrating	3.80 (1.16)[a]	2.29 (1.24)[b]	1.96 (1.34)[b]	3.02 (.82)[c]	31.09*
Overly soft-hearted	4.63 (.57)[a]	2.18 (1.00)[b]	1.63 (1.15)[c]	2.76 (.79)[d]	118.65*
Maladaptive High mean	4.28 (.55)[a]	2.17 (.86)[b]	1.79 (1.03)[c]	2.84 (.68)[d]	95.55*
Adaptive High					
Trusting	3.86 (1.15)[a]	1.85 (1.07)[b]	1.67 (1.19)[b]	2.85 (.78)[c]	61.15*
Honest, forthright	3.67 (1.26)[a]	2.10 (1.10)[b]	1.45 (.89)[c]	3.02 (.69)[d]	91.93*
Giving, generous	4.22 (.98)[a]	1.97 (1.21)[b]	1.51 (.95)[c]	2.75 (.88)[d]	104.21*
Cooperative, obedient, deferential	4.09 (1.08)[a]	2.01 (.98)[b]	1.81 (1.13)[b]	2.92 (.77)[c]	55.75*
Humble, modest, unassuming	3.61 (1.32)[a]	2.61 (1.02)[b]	1.60 (1.11)[c]	2.67 (.85)[b]	41.97*
Empathic, sympathetic, gentle	4.19 (.91)[a]	2.32 (1.02)[b]	1.65 (1.10)[c]	2.88 (.88)[d]	95.01*
Adaptive High mean	3.95 (.81)[a]	2.15 (.78)[b]	1.63 (.96)[c]	2.85 (.68)[d]	94.49*
Adaptive Low					
Cautious, skeptical	3.84 (1.28)[a]	2.10 (1.20)[b]	2.01 (1.25)[b]	2.89 (.74)[c]	27.71*
Savvy, cunning, shrewd	3.84 (1.00)[a]	2.26 (1.11)[b]	2.30 (1.19)[b]	3.00 (.79)[c]	25.21*
Frugal, withholding	3.41 (1.25)[a]	2.00 (1.34)[b]	2.36 (1.26)[b]	2.92 (.69)[c]	16.10*
Critical, contrary	3.68 (.85)[a]	2.05 (1.19)[b]	2.07 (1.00)[b]	2.97 (.79)[c]	43.49*
Confident, self-assured	3.47 (1.00)[a]	2.48 (1.31)[b]	2.43 (1.28)[b]	2.84 (.73)[b]	11.20*
Strong, tough	3.57 (.95)[a]	2.34 (1.29)[b]	2.11 (1.21)[b]	2.90 (.73)[c]	25.32*
Adaptive Low mean	3.63 (.59)[a]	2.22 (.91)[b]	2.23 (.89)[b]	2.92 (.62)[c]	47.05*
Maladaptive Low					
Cynical, suspicious	4.33 (.92)[a]	1.80 (1.14)[b]	2.24 (1.35)[c]	3.01 (.70)[d]	67.10*
Deceptive, dishonest, manipulative	3.90 (1.11)[a]	1.56 (1.23)[b]	2.15 (1.24)[c]	2.89 (.72)[d]	56.53*
Greedy, self-centered, exploitative	3.58 (1.14)[a]	1.57 (.98)[b]	1.75 (1.15)[b]	2.90 (.75)[c]	69.19*
Combative, aggressive	3.64 (.91)[a]	1.92 (1.05)[b]	1.78 (1.20)[b]	2.95 (.78)[c]	52.45*
Boastful, vain, pretentious, arrogant	3.64 (.97)[a]	1.66 (1.17)[b]	2.30 (1.20)[c]	2.76 (.70)[d]	47.19*
Callous, merciless, ruthless	3.73 (.78)[a]	1.74 (1.18)[b]	1.96 (1.21)[b]	3.15 (.75)[c]	57.38*
Maladaptive Low mean	3.81 (.63)[a]	1.73 (1.01)[b]	2.03 (1.00)[c]	2.95 (.63)[d]	84.08*
Overall Mean	3.91 (.51)[a]	2.07 (.81)[b]	1.92 (.91)[c]	2.89 (.59)[d]	85.83*

Note. n = 89. * = p < .001. Means separated by a different superscript (e.g. a, b, c, d) were significantly different p < .001. FFF = Five Factor Form (Rojas & Widiger, 2014).

Table 3.13. Means and Standard Deviations of Similarity and Dissimilarity for FFF Conscientiousness Components

	Synonym *M* (SD)	Antonym Adaptive *M* (SD)	Antonym Maladaptive *M* (SD)	Dummy *M* (SD)	F-Value
Maladaptive High					
Perfectionistic	3.78 (.89)[a]	1.94 (.99)[b]	1.56 (.91)[c]	2.97 (.71)[d]	79.89*
Preoccupied w/organization	4.52 (.88)[a]	1.52 (.98)[b]	1.58 (.92)[b]	2.78 (.76)[c]	103.51*
Rigidly principled	3.92 (.88)[a]	2.01 (.82)[b]	1.59 (.91)[c]	2.68 (.69)[d]	98.02*
Workaholic, acclaim-seeking	4.57 (.68)[a]	2.06 (.96)[b]	1.51 (.83)[c]	2.84 (.66)[d]	168.89*
Single-minded doggedness	4.00 (.99)[a]	2.21 (.95)[b]	2.45 (1.18)[b]	3.10 (.53)[d]	34.20*
Ruminative, indecisive	3.66 (1.20)[a]	1.49 (.90)[b]	2.00 (1.19)[c]	2.86 (.62)[d]	67.62*
Maladaptive High mean	4.09 (.51)[a]	1.87 (.66)[b]	1.77 (.71)[b]	2.86 (.43)[c]	155.44*
Adaptive High					
Efficient, resourceful	3.50 (.88)[a]	2.36 (.76)[b]	1.86 (1.00)[c]	2.78 (.66)[d]	39.98*
Organized, methodical	4.35 (.89)[a]	1.23 (.60)[b]	1.47 (.82)[c]	2.68 (.63)[d]	212.62*
Dependable, reliable, responsible	3.78 (.82)[a]	2.45 (.92)[b]	1.42 (.84)[c]	2.72 (.71)[b]	109.02*
Purposeful, diligent, ambitious	3.92 (.84)[a]	2.37 (.96)[b]	1.48 (.83)[c]	3.11 (.59)[d]	113.50*
Self-disciplined, willpower	3.83 (.99)[a]	2.24 (.83)[b]	1.73 (.91)[c]	2.90 (.63)[d]	58.34*
Thoughtful, reflective, circumspect	2.83 (1.46)[a]	1.83 (.97)[b]	1.64 (.90)[b]	2.87 (.72)[a]	52.33*
Adaptive High mean	3.70 (.56)[a]	2.08 (.56)[b]	1.59 (.66)[c]	2.84 (.49)[d]	145.01*
Adaptive Low					
Casual	3.78 (1.03)[a]	2.73 (.86)[b]	2.13 (.84)[c]	2.63 (.71)[b]	48.28*
Disorganized	4.18 (1.14)[a]	1.71 (1.33)[b]	1.65 (.96)[b]	2.85 (.61)[c]	56.46*
Easy-going, capricious	2.98 (1.01)[a]	2.80 (.96)[a]	2.20 (.92)[b]	2.69 (.56)[a]	20.45*
Carefree, content	3.38 (1.03)[a]	2.38 (1.11)[bc]	2.25 (.97)[b]	2.79 (.76)[c]	17.69*
Leisurely	3.09 (.98)[a]	2.20 (.92)[b]	2.28 (1.02)[b]	2.84 (.67)[a]	19.35*
Quick to make decisions	4.28 (.92)[a]	2.01 (1.01)[b]	1.63 (.93)[b]	2.79 (.57)[c]	103.94*
Adaptive Low mean	3.61 (.58)[a]	2.31 (.66)[b]	2.02 (.65)[c]	2.77 (.48)[d]	78.71*
Maladaptive Low					
Disinclined, lax	3.98 (.98)[a]	2.36 (.81)[b]	1.91 (.89)[c]	2.66 (.60)[d]	58.82*
Careless, sloppy, haphazard	4.24 (1.01)[a]	1.38 (.82)[b]	1.73 (1.02)[c]	2.92 (.63)[d]	109.84*
Irresponsible, undependable, immoral	3.10 (.89)[a]	1.36 (.89)[b]	1.90 (.85)[c]	2.56 (.68)[d]	64.18*
Aimless, shiftless, desultory	3.63 (1.01)[a]	1.59 (.98)[b]	1.83 (.86)[b]	2.71 (.66)[c]	58.91*
Negligent, hedonistic	3.51 (1.07)[a]	1.84 (1.00)[b]	2.39 (1.12)[c]	3.03 (.75)[d]	47.55*
Hasty, rash	4.39 (.84)[a]	1.64 (.96)[b]	2.17 (1.19)[c]	2.70 (.73)[d]	88.83*
Maladaptive Low mean	3.80 (.54)[a]	1.70 (.67)[b]	1.99 (.68)[c]	2.76 (.52)[d]	135.07*
Overall Mean	3.79 (.40)[a]	1.99 (.56)[b]	1.85 (.61)[c]	2.81 (.40)[d]	153.51*

Note. n = 89. * = p < .001. Means separated by a different superscript (e.g. a, b, c, d) were significantly different p < .001. FFF = Five Factor Form (Rojas & Widiger, 2014).

Chapter Four: Discussion

Conclusions and Implications

A limitation of existing measures of the FFM is a relatively weak coverage of maladaptive variants of extraversion, openness, agreeableness, conscientiousness, and low neuroticism. There is a significant body of theory and research to support the view that meaningful maladaptive variants exist at both poles of the FFM (Samuel, 2011; Trull, 2012; Widiger, 2011; Widiger, Samuel, Mullins-Sweat, Gore, & Crego, 2012). In addition, some of these poles appear to relatively important for covering significant personality disorder traits, such as the glib charm and fearlessness of psychopathy from low neuroticism (Crego & Widiger, 2014; Poy, Seggara, Esteller, Lopez, & Molto, 2014), the gullibility, self-effacement, and subservience of dependent personality disorder from high agreeableness (Gore & Pincus, 2012; Gore et al., 2012), and the perfectionism, ruminative deliberation, and workaholism of obsessive-compulsive personality disorder from high conscientiousness (Crego, Samuel, & Widiger, 2014; Samuel et al., 2012; Samuel & Widiger, 2011). Given the potential importance of assessing for maladaptive variants of the FFM at both poles, it is perhaps a significant limitation of the existing FFM measures not to include any such assessment (Haigler & Widiger, 2001; Krueger et al., 2011; Reynolds & Clark, 2001).

The FFF is a recently developed and relatively unique measure in that each item of the FFF includes both an adaptive and maladaptive variant of a respective FFM trait at both poles. Rojas and Widiger (2014, in press) have provided data to support the validity of the FFF items as measures of respective FFM domains and facets. However, no study

to date has addressed whether there is empirical support for the unique structure of each FFF item.

The current study addressed this question in two parts. First, the FFF was administered as a self-report measure and then each of the four components of each item were correlated with one another. If the results were to be consistent with the FFF scoring, the adaptive and maladaptive components on each respective pole should correlate positively with one another, whereas the components on opposite sides of each item should correlate negatively with one another. The current study found, at best, only mixed support for the scoring with respect to the correlations among the components. The correlations among the dismantled FFF domain components (averaged across items within each domain) matched with scoring expectations for only one to three of the six comparisons for each domain. For example, Conscientiousness had a medium positive correlation for maladaptive high with adaptive high components; and Neuroticism had (1) a large, positive correlation for maladaptive high with adaptive high components, (2) a medium negative correlation for maladaptive high with adaptive low components, and (3) a medium negative correlation for adaptive high with adaptive low components.

In addition, inconsistent with the scoring, the correlations among the dismantled FFF domain components (averaged across items within each domain) did not match with scoring expectations for three to five of the six comparisons for each domain. At the domain level, these inconsistencies are readily apparent. For example, scoring of the FFF would indicate adaptive high components should negatively correlate with adaptive low components. However, for Agreeableness, adaptive high components compared to

adaptive low components produced one medium, negative correlation; two weak, negative correlations; and three weak, positive correlations.

Even for the domain that obtained the most positive results (i.e. Neuroticism), the findings could in fact be considered questionable. The structure of the FFF is said to contain maladaptive traits on either end of each pole, along with adaptive traits in between. However, the terms used for adaptive high neuroticism may not be fully capturing "adaptive" high levels of neuroticism but, rather, maladaptive high traits within the normal range of functioning. For example, one could argue whether being "pessimistic, discouraged" or "self-indulgent" are actually adaptive traits. In fact, these traits would more accurately be considered "normal" high presentations of neuroticism rather than "adaptive" traits of neuroticism. This distinction is why the FFF is labeled as such, with "normal high" and "normal low" headings on either pole rather than "adaptive high" or "adaptive low" headings. It was simply not apparent to the authors of the FFF that one could readily describe an adaptively high neuroticism. In any case, the strong correlational results relating the "adaptive" high neuroticism with the maladaptive high neuroticism may simply reflect that in this instance, the adaptive component is perhaps more aptly understood to also be maladaptive.

The weak correlational results may reflect in part the natural tendency of measures of maladaptive to correlate positively with other measures of maladaptivity, irrespective of the content, and measures of maladaptivity to correlate negatively with measures of adaptivity, again irrespective of content. This relationship has been examined under many names, such as the p-factor, the Big One, and evaluation bias (Widiger & Oltmanns, 2017). Research examining evaluation bias demonstrates that

scales that assess dysfunction or impairment will generally correlate positively with one another, whereas scales assessing adaptive versus maladaptive traits will generally correlate negatively with one another, irrespective of content (Pettersson et al., 2014). Such findings are also consistent with the p-factor research, finding that all personality disorders tend to share a common general factor of maladaptive functioning (Wright et al., 2012), correlating positively with one another, even for personality disorders that would appear to concern opposing styles (e.g., schizoid and histrionic, or antisocial and dependent). Pettersson et al. indeed suggest that the bipolarity of maladaptive personality structure does not emerge unless one first removes the general or evaluative factor. However, there has been quite of few studies that have confirmed at least some degree of bipolar maladaptive personality structure without first removing the general factor (e.g., Clark, Livesley, Schroeder, & Irish, 1996; Markon et al., 2005; O'Connor, 2002, 2005; Watson et al., 2008).

Indeed, there is even support in previous research for the assessment of constructs that closely parallel components of the FFF. For example, Alden, Wiggins, and Pincus (1990) found that the IIP scales of Domineering and Nonassertive correlated -.60 with one another. Similarly, in an examination of the FFMPD trait scales, Crego and Widiger (2016) reported that Dominance and Timorousness loaded in opposite directions on the same factor .47 and -.72. The constructs assessed by these IIP and FFMPD scales resemble closely the components of "dominant, pushy" and "resigned, uninfluential" from the FFF. However, in the current study, these respective FFF components correlated -.09. The failure to obtain the expected negative correlation may reflect in part the fact that the assessment of the FFF components are confined to simply one item, whereas the

assessments of the respective constructs by the IIP and FFMPD are provided by multi-item scales, which have considerably more power and fidelity which is likely needed to overcome the impact of the general factor. On the other hand, it should also be noted that in the original report of the correlations among the IIP scales, Submissive and Controlling, considered to be assessing constructs opposite to one another, correlated .49 (Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988).

The current study also compared each of the four components of each FFF item with respect to their conceptual meaning. If the results were to be consistent with the FFF scoring, the adaptive and maladaptive components on each respective pole should be considered to be similar in meaning, whereas the components on opposite sides of each item should be considered dissimilar in meaning. The current study found strong support for the scoring when the meaning of each component was considered. The averaged component ratings for the domains of Neuroticism, Extraversion, Agreeableness, and Conscientiousness obtained strong results that were consistent with FFF scoring, which were also obtained at the individual component level. These results demonstrated that items located on the same pole were rated as similar in meaning (at times even synonyms) and items located on opposite poles were rated as dissimilar in meaning (at times even antonyms). More specifically, consistently across four out of five domains, maladaptive high items were rated as similar to adaptive high items and dissimilar to adaptive low and maladaptive low items; adaptive high items were rated as similar to maladaptive high items and dissimilar to adaptive low and maladaptive low items.; adaptive low items were rated as similar to maladaptive low items and dissimilar to

adaptive high and maladaptive high items; and maladaptive low items were rated as similar to adaptive low items and dissimilar to adaptive high and maladaptive high items.

The strong support with respect to the similarity and dissimilarity of each respective component lends indirect support to the suggestion that the weak results obtained with the correlations of the self-report ratings may reflect an artifact of the p-factor. For example, it is quite evident from the current results that in Extraversion, "frantic" is very similar in meaning to "energetic". In fact, these two components were considered to be synonyms ($M = 4.17$). If two traits are considered to be very similar in meaning, to the point of being synonyms, then they should correlate positively with one another. Yet, in the current study, these two components correlated -.05. Likewise, in Extraversion "attention-seeking" is very dissimilar in meaning to "socially withdrawn, isolated". In fact, these two components were considered to be antonyms ($M = 1.58$). If two traits are considered to be opposite in meaning to one another, as extraversion is opposite to introversion, and agreeableness is opposite to antagonism, then they should correlate negatively with one another. Yet, in the current study, these two components correlated -.03.

While the correlational comparisons of items at both poles provided mixed results, the results of the comparison of mean ratings of similarity or dissimilarity provide support for the scoring of the FFF. Four of the five domains consistently obtained results that were consistent with FFF scoring. For example, although results for the mean component correlations for Conscientiousness were weak, mean comparisons results were significant for all 24 comparisons and 93% of the component comparisons met cutoff expectations. Similarly, strong results were obtained for Neuroticism (95% of the

component comparisons met cutoff expectations), Extraversion (88%), and Agreeableness (97%) in which all mean comparisons results were significant for all 24 comparisons.

It should be acknowledged though that the results for the domain of Openness were not as strong as was obtained for the other four domains. Openness did obtain significant results for 18 of the 24 FFF components (75%). In addition, 56 of the remaining 72 component comparisons met the cutoff expectations (78%). Nevertheless, insignificant results were obtained for six of the 24 FFF components. Only a minority of the components failed to obtain significant results, but this was appreciably worse than was obtained for the four other domains. One item in particular obtained particular poor results, Openness to Feelings. The FFF Feelings item includes the four components of "alexithymic" (maladaptive low), "constricted, blunted" (adaptive low), "self-aware expressive" (adaptive high), and "intense, in turmoil" (maladaptive high). The current results clearly failed to support the structure of this item.

Openness has been the domain of the FFM that has most often obtained weak, problematic, and/or inconsistent results (e.g., Haigler & Widiger, 2001; Samuel & Widiger, 2008; Watson et al., 2008). These findings may reflect, in part, that the domain of openness was constructed by Costa and McCrae (1980) prior to their awareness of the Big Five and/or the respective domain of intellect (Goldberg, 1993). McCrae and Costa (1983) originally began with a three-factor model, confined to neuroticism, extraversion, and openness. They conceptualized openness as a domain that described ideal personality traits, such as self-actualization, an open mind, and self-realization, as described in humanistic psychology (e.g., Coan, 1974; Rogers, 1961; Rokeach, 1960). They soon

became aware of the Big Five and added the two domains of agreeableness and conscientiousness, but they did not revise their facet models for openness, neuroticism, or extraversion. McCrae (1990) eventually acknowledged that their domain of openness did not align that well with the Big Five domain of intellect (Goldberg, 1993). In sum, it is perhaps relatively more difficult to identify maladaptive variants of what was originally identified as ideal personality traits (i.e., maladaptive openness to aesthetics, feelings, and ideas).

Limitations

A potential strength of the current study was that the sample of adults of Study One had all been in mental health treatment. The participants in the second study were not in treatment, but there would have been no appreciable value or benefit in having the participants of Study Two be in treatment. Both studies though sampled participants from MTurk. Internet data collection has less control over research participation than would be available in face-to-face test administration. On the other hand, research has found that MTurk data quality is at least equal to findings obtained through traditional methods (Chandler & Shapiro, 2016; Shapiro et al., 2013). For example, Buhrmester et al. (2011) reported consistent psychometric properties with the general population on a variety of self-report inventories. Paolacci et al. (2010) conducted a series of replication studies of standard judgment and decision-making experiments, demonstrating consistent with findings obtained through more commonly sampled populations. Gore and Widiger (2015) reported a close replication of FFMPD findings across MTurk and student samples.

Summary

The FFF is a brief measure of adaptive and maladaptive personality. Its inclusion of maladaptive variants at both poles of each item is relatively unique. Rojas and Widiger (2014, in press) have provided data to support the validity of the FFF items as measures of respective FFM domains and facets. However, no study to date has addressed whether there is empirical support for the unique structure of each FFF item. The results of the current study demonstrated good support for the similarity and dissimilarity of the meaning of respective FFF components with one another, albeit not for their correlations.

Appendix A: Five Factor Form (FFF)

Please write rating in blank on left below ⬇		Maladaptive high (5)	Normal high (4)	Neutral (3)	Normal low (2)	Maladaptive low (1)
NEUROTICISM						
	Anxiousness	Fearful, Anxious	Vigilant, worrisome, wary		Relaxed, calm	Oblivious to signs of threat
	Angry hostility	Rageful	Brooding, resentful, defiant		Even-tempered	Won't even protest exploitation
	Depressiveness	Depressed, suicidal	Pessimistic, discouraged		Not easily discouraged	Unrealistic, overly optimistic
	Self-Consciousness	Uncertain of self, ashamed	Self-conscious, embarrassed		Self-assured, charming	Glib, shameless
	Impulsivity	Unable to resist impulses	Self-indulgent		Restrained	Overly restrained
	Vulnerability	Helpless, overwhelmed	Vulnerable		Resilient	Fearless, feels invincible
EXTRAVERSION						
	Warmth	Intense attachments	Affectionate, warm		Formal, reserved	Cold, distant
	Gregariousness	Attention-seeking	Sociable, outgoing, personable		Independent	Socially withdrawn, isolated
	Assertiveness	Dominant, pushy	Assertive, forceful		Passive	Resigned, uninfluential
	Activity	Frantic	Energetic		Slow-paced	Lethargic, sedentary
	Excitement-Seeking	Reckless, foolhardy	Adventurous		Cautious	Dull, listless
	Positive Emotions	Melodramatic, manic	High-spirited, cheerful, joyful		Placid, sober, serious	Grim, anhedonic
OPENNESS						
	Fantasy	Unrealistic, lives in fantasy	Imaginative		Practical, realistic	Concrete
	Aesthetics	Bizarre interests	Aesthetic interests		Minimal aesthetic interests	Disinterested
	Feelings	Intense, in turmoil	Self-aware, expressive		Constricted, blunted	Alexithymic
	Actions	Eccentric	Unconventional		Predictable	Mechanized, stuck in

						routine
	Ideas	Peculiar, weird	Creative, curious		Pragmatic	Closed-minded
	Values	Radical	Open, flexible		Traditional	Dogmatic, moralistically intolerant
AGREEABLENESS						
	Trust	Gullible	Trusting		Cautious, skeptical	Cynical, suspicious
	Straightforwardness	Guileless	Honest, forthright		Savvy, cunning, shrewd	Deceptive, dishonest, manipulative
	Altruism	Self-sacrificial, selfless	Giving, generous		Frugal, withholding	Greedy, self-centered, exploitative
	Compliance	Yielding, subservient, meek	Cooperative, obedient, deferential		Critical, contrary	Combative, aggressive
	Modesty	Self-effacing, self-denigrating	Humble, modest, unassuming		Confident, self-assured	Boastful, vain, pretentious, arrogant
	Tender-Mindedness	Overly soft-hearted	Empathic, sympathetic, gentle		Strong, tough	Callous, merciless, ruthless
CONSCIENTIOUSNESS						
	Competence	Perfectionistic	Efficient, resourceful		Casual	Disinclined, lax
	Order	Preoccupied w/organization	Organized, methodical		Disorganized	Careless, sloppy, haphazard
	Dutifulness	Rigidly principled	Dependable, reliable, responsible		Easy-going, capricious	Irresponsible, undependable, immoral
	Achievement	Workaholic, acclaim-seeking	Purposeful, diligent, ambitious		Carefree, content	Aimless, shiftless, desultory
	Self-Discipline	Single-minded doggedness	Self-disciplined, willpower		Leisurely	Negligent, hedonistic
	Deliberation	Ruminative, indecisive	Thoughtful, reflective, circumspect		Quick to make decisions	Hasty, rash

References

Alden, L. E., Wiggins, J. S., & Pincus, A. L. (1990). Construction of the circumplex scales for the Inventory of Interpersonal Problems. *Journal of Personality Assessment, 55*(3&4), 521-536.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed). Washington, DC: Author.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*, 3-5.

Chandler, J., & Shapiro, D. (2016). Conducting clinical research using crowdsourced convenience samples. *Annual Review of Clinical Psychology*, *12*, 53-81.

Clark, L. A., Livesley, W. J., Schroeder, M. L., & Irish, S. L. (1996). Convergence of two systems for assessing personality disorder. *Psychological Assessment, 8*, 294-303.

Clark, L. A., Simms, L. J., Wu, K. D., & Casillas, A. (2014). *Schedule for Nonadaptive and Adaptive Personality-2nd Edition (SNAP-2): Manual for administration, scoring, and interpretation.* Notre Dame, IN: University of Notre Dame.

Coan, R. W. (1974). *The optimal personality*. New York: Columbia University Press.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155-159.

Coker, L. A., Samuel, D. B., & Widiger, T. A. (2002). Maladaptive personality functioning within the Big Five and the FFM. *Journal of Personality Disorders, 16*, 385-401.

Costa, P. T., & McCrae, R. R. (1980). Still stable after all these years: Personality as a key to some issues in adulthood and old age. In P. B. Baltes and O. G. Brim (Eds.), *Life span development and behavior* (Vol. 3). New York: Academic Press.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.

Crego, C., Samuel, D. B., & Widiger, T. A. (2015). The FFOCI and other measures and models of OCPD. *Assessment, 22*, 135-151.

Crego, C., & Widiger, T. A. (2016). Convergent and discriminant validity of alternative measures of maladaptive personality traits. *Psychological Assessment, 28*(12), 1561-1575.

Crego, C., & Widiger, T. A. (2014). Psychopathy, DSM-5, and a caution. *Personality Disorders: Theory, Research, and Treatment*, *5,* 335-347.

Edmundson, M., Lynam, D. R., Miller, J. D., Gore, W. L., & Widiger, T. A. (2011). A five-factor measure of schizotypal personality traits. *Assessment*, *18,* 321-334.

Enders, C. K. (2006). A primer on the use of modern missing-data methods in psychosomatic medicine research. *Psychosomatic Medicine, 68*, 427-736.

Glover, N., Miller, J. D., Lynam, D. R., Crego, C., & Widiger, T. A. (2012). The Five-Factor Narcissism Inventory: A Five-Factor Measure of narcissistic personality traits. *Journal of Personality Assessment*, *94*(5), 500-512.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*, 26-34.

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, *40*, 84-96.

Gore, W. L., & Pincus, A. L. (2013). Dependency and the five-factor model. In T. A. Widiger & P. T. Costa (Eds.), *Personality disorders and the five-factor model* (3rd ed., pp. 163-178). Washington, DC: American Psychological Association.

Gore, W. L., Presnall, J. R., Miller, J. D., Lynam, D. R., & Widiger, T. A. (2012). A five-factor measure of dependent personality traits. *Journal of Personality Assessment*, *94*(5), 488-499.

Gore, W. L. & Widiger, T. A. (2013). The DSM-5 dimensional trait model and five factor models of general personality. *Journal of Abnormal Psychology, 122*, 816-821.

Gore, W. L., & Widiger, T. A. (2015). Assessment of dependency by the FFDI: Comparisons to the PID-5 and maladaptive agreeableness. *Personality and Mental Health*, 9, 258-276.

Gosling, S. D., Rentfrow, P. J., & Swann, Jr., W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, *37*, 504-528.

Haigler, E. D., & Widiger, T. A. (2001). Experimental manipulation of NEO PI-R items. *Journal of Personality Assessment, 77*, 339-358.

Horowitz, L. M., Alden, L. E., Wiggins, J. S., & Pincus, A. L. (2000). *IIP-64/IIP-32 professional manual.* San Antonio, TX: The Psychological Corporation.

Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureño, G., & Villaseñor, V. S. (1988). Inventory of Interpersonal Problems: Psychometric properties and clinical application. *Journal of Consulting and Clinical Psychology, 56,* 885-892.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. *Handbook of Personality: Theory and Research*, *2*, 102-138.

Krueger, R. F., Derringer, J., Markon, K. F., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine, 42,* 1879-1890.

Krueger, R. F., Eaton, N. R., Clark, L. A., Watson, D., Markon, K. E., Derringer, J., Skodol, A., & Livesley, W. J. (2011). Deriving an empirical structure of personality pathology for DSM-5. *Journal of Personality Disorders, 25*, 170-191.

Leary, T. (1957). *Interpersonal diagnosis of personality.* New York: Ronald Press.

Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO Personality Inventory. *Multivariate Behavioral Research*, *39*, 329-358.

Lynam, D. R., Gaughan, E. T., Miller, J. D., Miller, D. J., Mullins-Sweatt, S., & Widiger, T. A. (2011). Assessing the basic traits associated with psychopathy: Development and validation of the Elemental Psychopathy Assessment. *Psychological Assessment*, *23*(1), 108-124.

Lynam, D. R., Loehr, A., Miller, J. D., & Widiger, T. A. (2012). A Five-Factor Measure of Avoidant Personality: The FFAvA. *Journal of Personality Assessment*, *94*(5), 466-474.

Markon, K. E., Krueger, R. F., & Watson, D. (2005). Delineating the structure of normal and abnormal personality: An integrative hierarchical approach. *Journal of Personality and Social Psychology, 88*, 139-157.

McCrae, R. R. (1990). Traits and trait names: How well is Openness represented in natural languages? *European Journal of Personality, 4*, 119-129.

McCrae, R. R., & Costa, P. T. (1983). Joint factors in self-reports and ratings: Neuroticism, Extraversion, and Openness to Experience. *Personality and Individual Differences, 4*, 245-255.

McCrae, R. R., & Costa, P. T. (1989). The structure of interpersonal traits: Wiggins' circumplex and the five-factor model. *Journal of Personality and Social Psychology, 56*, 586-595.

Morey, L. C. (1985). An empirical comparison of interpersonal and DSM-III personality disorders: Their derivation and correlates. *Journal of Personality Assessment, 49*, 245-251.

Mullins-Sweatt, S. N., Edmundson, M., Sauer-Zavala, S., Lynam, D. R., Miller, J. D., & Widiger, T. A. (2012). Five-Factor Measure of Borderline Personality Traits. *Journal of Personality Assessment*, *94*(5), 475-487.

Mullins-Sweatt, S. N., Jamerson, J. E., Samuel, D. B., Olson, D. R., & Widiger, T. A. (2006). Psychometric properties of an abbreviated instrument of the Five-Factor Model. *Assessment*, *13*, 119-137.

Nettle, D. (2006). The evolution of personality variation in humans and other animals. *American Psychologist*, *61*, 622-631.

O'Connor, B. P. (2002). A quantitative review of the comprehensiveness of the five-factor model in relation to popular personality inventories. *Assessment, 9*, 188-203.

O'Connor, B. P. (2005). A search for consensus on the dimensional structure of personality disorders. *Journal of Clinical Psychology, 61*, 323-345.

Paolacci, G., Chandler, J., & Ipeirotis, P. (2010). Running experiments on amazon mechanical turk. *Judgment and Decision Making*, *5*(5), 411-419.

Pettersson, E., Mendle, J., Turkheimer, E., Horn, E. E., Ford, D. C., Simms, L. J., & Clark, L. A. (2014). Do maladaptive behaviors exist at one or both ends of personality traits? *Psychological Assessment, 26*, 433-446.

Pincus, A. L., & Hopwood, C. J. (2012). A contemporary interpersonal model of personality pathology and personality disorder. In T. A. Widiger (Ed.), *The Oxford handbook of personality disorders* (pp. 372-398). New York: Oxford University Press**.**

Poy, R., Seggara, P., Esteller, A., Lopez, R., & Molto, J. (2014). FFM description of the Triarchic conceptualization of psychopathy in men and women. *Psychological Assessment*, *26*, 69-76.

Reynolds, S. K. & Clark, L. A. (2001). Predicting dimensions of personality disorder from domains and facets of the five-factor model. *Journal of Personality*, *69*, 199-222.

Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy*. Boston, MA: Houghton-Mifflin.

Rojas, S. L., & Widiger, T. A. (2014). The convergent and discriminant validity of the Five Factor Form. *Assessment, 21,* 143-157.

Rojas, S. L. & Widiger, T. A. (in press). Convergent and discriminant validity of the Five Factor Form and the Sliderbar Inventory. *Assessment.*

Rokeach, M. (1960). *The open and closed mind.* New York: Basic Books.

Samuel, D. B. (2011). Assessing personality in the DSM–5: The utility of bipolar constructs. *Journal of Personality Assessment*, *93*, 390-397.

Samuel, D. B., Riddell, A. B., Lynam, D. R., Miller, J. D., & Widiger, T. A. (2012). A five factor measure of obsessive–compulsive personality traits. *Journal of Personality Assessment, 94,* 456-465.

Samuel, D. B., & Widiger, T. A. (2008). A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: A facet level analysis. *Clinical Psychology Review*, *28*(8), 1326-1342.

Samuel, D. B., & Widiger, T. A. (2011). Conscientiousness and obsessive-compulsive personality disorder. *Personality Disorders: Theory, Research, and Treatment, 2*, 161-174.

Shapiro, D. N., Chandler, J., & Mueller, P. A. (2013). Using Mechanical Turk to study clinical populations. *Clinical Psychological Science, 1,* 213-220.

Sim, J. P., & Romney, D. M. (1990). The relationship between a circumplex model of interpersonal behaviors and personality disorders. *Journal of Personality Disorders, 4,* 329-341.

Simms, L. J., & Clark, L. A. (2005). Validation of a computerized adaptive version of the Schedule for Nonadaptive and Adaptive Personality (SNAP). *Psychological Assessment*, *17*, 28-43.

Simms, L. J., & Clark, L. A. (2006). The Schedule for Nonadaptive and Adaptive Personality (SNAP): A dimensional measure of traits relevant to personality and personality pathology. In S. Strack (Ed.), *Differentiating normal and abnormal personality* (2nd ed., pp. 431-450). New York: Springer.

Simms, L. J., Goldberg, L. R., Roberts, J. E., Watson, D., Welte, J., & Rotterman, J. H. (2011). Computerized adaptive assessment of personality disorder: Introducing the CAT-PD project. *Journal of Personality Assessment*, *93*(4), 380-389.

Smith, S. W., Hilsenroth, M. J., & Bornstein, R. F. (2009). Convergent validity of the SWAP-200 dependency scales. *Journal of Nervous and Mental Disease, 197,* 613-618.

Soldz, S., Budman, S., Demby, A., & Merry, J. (1993). Representation of personality disorders in circumplex and five-factor space: Explorations with a clinical sample. *Psychological Assessment, 5,* 41-52.

Tomiatti, M., Gore, W. L., Lynam, D. R., Miller, J. D., & Widiger, T. A. (2012). A five-factor measure of histrionic personality traits. In Alexandra M. Columbus (Ed.), *Advances in psychology research (*Vol. 87, pp. 113-138). Hauppauge, NY: Nova Science Publishers.

Trobst, K. K., Ayearst, L. E., & Salekin, R. T. (2004). Where is the personality in

personality disorder assessment? A comparison across four sets of personality disorder scales. *Multivariate Behavioral Research, 39*, 231-271.

Trull, T. J. (2012). The five-factor model of personality disorder and DSM-5. *Journal of Personality*, *80*, 1697-1720.

Watson, D., Clark, L. A., & Chmielewski, M. (2008). Structures of personality and their relevant to psychopathology: II. Further articulation of a comprehensive unified trait structure. *Journal of Personality, 76*, 1485-1522.

Watson, D., Clark, L. A., & Harkness, A. R. (1994). Structures of personality and their relevance to psychopathology. *Journal of Abnormal Psychology*, *103*(1), 18-31.

Wiggins, J. S., & Pincus, A. L. (2002). Personality structure and the structure of personality disorders. In P. T. Costa & T. A. Widiger (Eds.), *Personality disorders and the five-factor model of personality* (2nd ed., pp. 103–124*)*. Washington, DC: American Psychological Association.

Widiger, T. A. (2011). The DSM-5 dimensional model of personality disorder: rationale and empirical support. *Journal of Personality Disorders, 25*, 222-234.

Widiger, T. A. & Oltmanns, J. R. (2017). The general factor of psychopathology and personality. *Clinical Psychological Science, 5*(1), 182-183.

Widiger, T. A., Lynam, D. R., Miller, J. D., & Oltmanns, T. F. (2012). Measures to assess maladaptive variants of the five-factor model. *Journal of Personality Assessment*, *94*(5), 450-455.

Widiger, T. A., Samuel, D. B., Mullins-Sweat, S., Gore, W. L., & Crego, C. (2012). Integrating normal and abnormal personality structure: The five-factor model. In T. A. Widiger (Ed.), *Oxford handbook of personality disorders* (pp. 82-107). NY: Oxford University Press.

Widiger, T. A., & Simonsen, E. (2005). Alternative dimensional models of personality disorder: Finding a common ground. *Journal of Personality Disorders, 19*,110-130.

Wright, A. G. C., & Simms, L. J. (2014). On the structure of personality disorder traits: Conjoint analysis of the CAT-PD, PID-5, and NEO PI-3 trait models. *Personality Disorders: Theory, Research, and Treatment, 5*, 43-54.

Wright, A. G., Thomas, K. M., Hopwood, C. J., Markon, K. E., Pincus, A. L., & Krueger, R. F. (2012). The hierarchical structure of DSM-5 pathological personality traits. *Journal of Abnormal Psychology*, *121*, 951-957.

VITA

Stephanie L. Rojas

EDUCATION

8/2009 - 05/2011	**Northern Arizona University** Master of Arts, Psychology Advisor: Virginia R. Blankenship, Ph.D. Master's Thesis: *Personality Disorders as Mediating Variables Between the Five Factors of Personality and Problem Behavior*
8/2005 - 5/2009	**University of Nevada, Las Vegas** Bachelor of Arts, Psychology Advisor: Kimberly A. Barchard, Ph.D.

CLINICAL POSITIONS

2016 - 2017	**Eastern State Hospital, Lexington, KY** *Practicum Therapist*
2015 - 2016	**Cardinal Hill Rehabilitation Hospital, Lexington, KY** *Practicum Therapist*
2013 - 2016	**Jesse G. Harris, Jr. Psychological Services Center, University of Kentucky** *Therapist*
2014 - 2015	**Dialectical Behavior Therapy, Jesse G. Harris, Jr. Psychological Services Center, University of Kentucky** *Co-Leader*
2014 - 2015	**Lexington Veteran Affairs Medical Center, Lexington, KY** *Practicum Therapist*
2014	**Mindfulness Skills Group, Jesse G. Harris, Jr. Psychological Services Center, University of Kentucky** *Co-Leader*
2014	**Healthy Relationships, Salvation Army, Lexington, KY** *Co-leader*
2013 - 2014	**Jesse G. Harris, Jr. Psychological Services Center, University of Kentucky** *Center Coordinator*
2011 - 2012	**Skills 4 Kids, Las Vegas, NV** *Psychosocial Rehabilitation and Basic Skills Training*

TEACHING POSITIONS

Primary Instructor, Undergraduate Level	University of Kentucky
Introduction to Psychology	Summer 2013 & Summer 2014
Laboratory Instructor, Graduate Level	University of Kentucky
Personality Assessment	Spring 2015
Clinical Methodology	Fall 2014

Laboratory Instructor, Undergraduate Level University of Kentucky

Developmental Psychology	Fall 2016 & Spring 2017
Introduction to Psychology	Spring 2014 & Summer 2015
Research Methods	Fall 2013

Northern Arizona University

Research Methods	Spring 2011
Psychology of Personality	Fall 2010- Spring 2011
Introduction to Psychology	Spring 2010- Spring 2011
Developmental Psychology	Fall 2009

RESEARCH POSITIONS

2012 - 2017	**Psychopathology Laboratory, University of Kentucky** *Research Assistant*
2010 - 2011	**Graduate Student Researcher, Northern Arizona University** *Research Assistant*
2007- 2009	**Interactive Measurement Group, University of Nevada, Las Vegas** *Research Assistant*

SCHOLASTIC & PROFESSIONAL AWARDS & HONORS

2012 - 2015	*Lyman T. Johnson Fellowship*, University of Kentucky
2012 - 2015	Daniel R. Reedy Quality Achievement Fellowship, University of Kentucky
2013 - 2017	*Graduate Student Travel Award*, University of Kentucky
2013	"Make A Difference Award" Nominee, University of Kentucky
2005 - 2009	*Dean's List*, University of Nevada, Las Vegas
2005 - 2009	*Governor Guinn Millennium Scholarship,* University of Nevada, Las Vegas

PROFESSIONAL PUBLICATIONS

Rojas, S. L. & Widiger, T. A. (in press-a). Personality disorders. In J. Hunsley & E. J. Mash (Eds.) *A Guide to Assessments That Work*. New York: Oxford University Press.

Crego, C., **Rojas, S. L.**, & Widiger, T. A. (in preparation). A new measure of self/interpersonal impairments.

Edmundson, M., Berry, D. T. R., Combs, H. L., Brothers, S. L., Harp, J. P., Williams, A., **Rojas, S. L.,** Saleh, A. K., & Scott, A. B. (in press). The Effects of Symptoms Information Coaching on the Feigning of Adult ADHD. *Psych Assessment.*

Rojas, S. L. & Widiger, T. A. (in press-b). Coverage of the DSM-IV-TR/DSM-5 Section II personality disorders with the DSM-5 dimensional trait model. *Journal of Personality Disorders.*

Rojas, S. L. & Widiger, T. A. (in press-c). Convergent and discriminant validity of the Five Factor Form and the Sliderbar Inventory. *Assessment.*

Widiger, T. A., Gore, W. L., Crego, C., **Rojas, S. L.**, & Oltmanns, J. R. (2017) Five-Factor Model and personality disorder. In T. A. Widiger (Ed.) *The Oxford*

Handbook of the Five Factor Model of Personality (pp. 449-478). New York: Oxford University Press.

Widiger, T. A. & **Rojas, S. L.** (2015). Personality disorders. In A. Tasman, J. Kay, J. A. Lieberman, M. B. First, & M. RIba. (Eds.), *Psychiatry (4th ed.), Vol. 2* (pp. 1706-1748). Chichester, UK: John Wiley & Sons.

Crego, C., Gore, W. L., **Rojas, S. L.**, & Widiger, T. A. (2015). The discriminant and convergent validity of the Personality Inventory for DSM-5. *Personality Disorders, 6(4),* 321-335.

Rojas, S. L. & Widiger, T. A. (2014). *Convergent and discriminant validity of the Five Factor Form. Assessment, 21*(2), 143-157.

Barchard, K. A., Brehman, D., Watson, B., Grob, K. E., **Rojas, S. L.**, Lane, R. D. & Nielsen, D. (2011). *Levels of Emotional Awareness Scale User's Manual* (2nd ed.). [Test Manual.] Available from Kim Barchard, barchard@unlv.nevada.edu.

CONFERENCE PRESENTATIONS

Rojas, S. L. & Widiger, T.A. (2014, September). *Bipolarity of Maladaptive Personality Structure*. Poster presented at the 2014 Society for Research in Psychopathology Annual Convention, Evanston, Illinois.

Shore, L. E., Lindley, J. A., Airheart, R. L, **Rojas, S. L.**, & Barchard, K. A. (2010, April). *The validity of a new method of scoring emotional awareness.* Poster presented at the 2010 Western Psychological Association Annual Convention, Cancun, Mexico.

Burns, S. S., Walker, H. E., Haseebullah, S. S., **Rojas, S. L.**, & Barchard, K. A. (2010, April). *Caring, trusting, superficial, strained: Sex differences in ideal relationships*. Poster presented at the 2010 Western Psychological Association Annual Convention, Cancun, Mexico.

Rojas, S. L., Johanson H.A., Brehman, B., & Barchard, K. A. (2009, April). *Emotional awareness and social insight.* Poster presented at the 2009 Western Psychological Association Annual Convention, Portland, OR.

Brehman, D. K., Burns, S. S., Thaler, N. S., **Rojas, S. L.**, & Barchard, K. A. (2009, April). *Fatigue: A threat to study results.* Poster presented at the 2009 Western Psychological Association Annual Convention, Portland, OR.

Linares, V., Shore, L. E., **Rojas, S. L.**, & Barchard, K. A. (2009, April). *Emotion intelligence and likelihood of other-blame.* Poster presented at the 2009 Western Psychological Association Annual Convention, Portland, OR.

Rojas, S. L., Bartlett, J. C., Thomas, N. K., Donnelly, K. A., & Barchard, K. A. (2008, April). *The relationship between social anxiety and emotional expressivity*. Poster presented at the 2008 Western Psychological Association Annual Convention, Irvine, CA.

Beecher, S. D., Scott, J., **Rojas, S. L.**, & Barchard, K. A. (2008, April). *Irritated, stressed, and disturbed: Do neurotic people have more accidents?* Poster presented at the 2008 Western Psychological Association Annual Convention, Irvine, CA.